

IN THE COURT OF ARBITRATION FOR SPORT  
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FLOYD LANDIS,

Appellant,

v.

CAS 2007/A/1394

UNITED STATES ANTI-DOPING AGENCY,

Respondent.

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VOLUME 1

March 19, 2008

9:41 a.m.

BEFORE:

MR. DAVID WILLIAMS, President

MR. DAVID RIVKIN, Arbitrator

MR. JAN PAULSSON, Arbitrator

REPORTED BY: GAIL F. SCHORR, C.S.R.

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A P P E A R A N C E S:

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A P P E A R A N C E S (Continued):

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2 A P P E A R A N C E S (Continued):

3 ALSO PRESENT:

4 FLOYD LANDIS

5 AMBER LANDIS

6 PAUL SCOTT

7 KEITH GOODMAN

8 SIMON DAVIS

9 BRUCE GOLDBERGER

10 ARNIE BAKER

11 LARRY BOWERS

12 CAROLINE HATTON

13 CHRISTIANE AYOTTE

14 CEDRIC SHACKELTON

15 RICHARD CLARK

16 DWIGHT MATTHEWS

17 J. THOMAS BRENNAN

18 JENNEFER BARTHOLOMEW  
Holme Roberts & Owen

19 CARMEN MARTINEZ LOPEZ, ESQ.  
20 Debevoise & Plimpton

21 KATHY HOGG, ESQ.  
Court of Arbitration for Sport

22 TODD THOMPSON, TFI

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09:40:59 2 P R O C E E D I N G S

09:41:08 3 THE PRESIDENT: Good morning,  
09:41:09 4 everyone. We are here on CAS appeal  
09:41:12 5 number 2007/A/1394, Floyd Landis v.  
09:41:20 6 USADA. My name is David Williams. As  
09:41:22 7 you have gathered, I'm the president. On  
09:41:25 8 my right is Mr. Jan Paulsson. On my  
09:41:28 9 left, Mr. David Rivkin.

09:41:30 10 Pursuant to our timetable, we  
09:41:34 11 will begin with administrative matters.  
09:41:36 12 And the most important one is to record  
09:41:38 13 who is present and to have counsel  
09:41:43 14 introduce themselves. There is, by the  
09:41:47 15 way, a list of all the attendees which is  
09:41:49 16 available. I'll begin by asking Mr. Suh  
09:41:53 17 to introduce himself and his legal team  
09:41:56 18 and also the other persons who are  
09:41:59 19 present relating to the Appellant's case.

09:42:03 20 MR. SUH: Good morning, Mr.  
09:42:04 21 Chair and the panel. Thank you. Maurice  
09:42:07 22 Suh from Gibson Dunn & Crutcher,  
09:42:09 23 appearing on behalf of the Appellant,  
09:42:13 24 Floyd Landis, who's present with us here  
09:42:15 25 with his wife, Amber. To my immediate

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09:42:18 2 left is Dan Weiss, an associate with my  
09:42:20 3 office. To my immediate right is Paul  
09:42:22 4 Scott. Further on down the table, Todd  
09:42:28 5 Thompson, he's our graphic expert and  
09:42:29 6 will be running our exhibits for us. Kay  
09:42:32 7 Reeves, who is counsel in the case also.  
09:42:36 8 Arnie Baker, who is both a long-time  
09:42:39 9 friend of Mr. Landis, was his doctor and  
09:42:43 10 coach, all at various times. Simon  
09:42:48 11 Davis, testifying expert in this case, in  
09:42:51 12 the blue shirt and gray tie. To his  
09:42:54 13 immediate left is Keith Goodman,  
09:42:58 14 testifying expert in this case. And to  
09:43:00 15 his immediate left, Bruce Goldberger. I  
09:43:04 16 think that covers everybody.

09:43:07 17 THE PRESIDENT: Thank you  
09:43:08 18 very much indeed.

09:43:09 19 Mr. Young.

09:43:10 20 MR. YOUNG: I have a longer  
09:43:12 21 list. Richard Young with Holme Roberts  
09:43:15 22 & Owen. Next to me is Matthew Barnett,  
09:43:17 23 formerly of Holme Roberts & Owen, now  
09:43:21 24 with Barnett & Barnett, his wife being  
09:43:23 25 the other Barnett. Jennifer Sloan of

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09:43:26 2 Holme Roberts & Owen, and Dan Dunn of  
09:43:29 3 Holme Roberts & Owen. We're the four  
09:43:32 4 attorneys in this case. With us is our  
09:43:35 5 paralegal, Jennefer Bartholomew.

09:43:37 6 Seated over here we have  
09:43:40 7 Caroline Hatton who is a consultant for  
09:43:43 8 us. She's fluent in both laboratory  
09:43:45 9 and French, which is helpful. Larry  
09:43:49 10 Bowers who's the senior managing  
09:43:51 11 director of the US Anti-Doping Agency.  
09:43:54 12 Tom Brenna who's an IRMS specialist and  
09:43:59 13 who is a testifying expert in the case.  
09:44:03 14 Cedric Shackelton who is a scientist  
09:44:06 15 with expertise in steroid metabolism  
09:44:19 16 and who's also a testifying expert,  
09:44:21 17 expert in steroid metabolism.  
09:44:24 18 Dr. Richard Clark, testifying expert,  
09:44:28 19 expert in steroid metabolism.  
09:44:31 20 Christiane Ayotte, Christiane is the  
09:44:35 21 director of the Montreal laboratory.  
09:44:37 22 And Dwight Matthews, who was the guy  
09:44:44 23 who invented the IRMS method.

09:44:47 24 THE PRESIDENT: And just our  
09:44:50 25 translator there is Diana Clark.

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09:44:53 2 MS. CLARK: I'm the French  
09:44:54 3 interpreter.

09:45:01 4 THE PRESIDENT: Thank you  
09:45:02 5 very much for those introductions.  
09:45:04 6 Could I please ask that if either side  
09:45:06 7 has any other people coming on other  
09:45:08 8 days who we haven't either noted here  
09:45:12 9 or who are additions, that if they  
09:45:15 10 could please advise Carmen, our  
09:45:17 11 secretary, so that she can keep track  
09:45:20 12 of things.

09:45:20 13 The next thing to talk about  
09:45:28 14 is transcript arrangements. We have a  
09:45:37 15 Livenote service. Gail Schorr is our  
09:45:40 16 transcriber. It would be helpful to  
09:45:42 17 her if at some time during the course  
09:45:45 18 of the day you tell her what your  
09:45:47 19 requirements are in the evenings,  
09:45:48 20 whether you want the transcript emailed  
09:45:52 21 to you or hard copies or whatever.  
09:45:55 22 Just tell her and she will facilitate  
09:45:57 23 that.

09:45:57 24 We have received this  
09:46:02 25 morning each side's exhibits in hard



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09:46:08 2 copy form. We still have some issues  
09:46:10 3 to determine about whether all are  
09:46:12 4 admissible, but thank you for bringing  
09:46:14 5 those.

09:46:14 6 There has been a fair deal  
09:46:16 7 of activity over the last few weeks and  
09:46:24 8 one of the things that that leads to is  
09:46:25 9 we would like to have at some stage of  
09:46:27 10 the proceedings from the parties a  
09:46:28 11 document which lists all relevant  
09:46:31 12 documents so that we make sure that we  
09:46:32 13 have an accurate and complete record of  
09:46:35 14 what has been filed in terms of motions  
09:46:38 15 and literally everything that's come  
09:46:41 16 before the tribunal. So if you would  
09:46:44 17 liaise with our secretary Carmen about  
09:46:46 18 that. But we want to leave the hearing  
09:46:48 19 knowing that we have an accurate record  
09:46:50 20 of all the material that's before us.

09:46:53 21 Then we come to the video  
09:47:00 22 segments of the video conferencing. It  
09:47:05 23 will not take place in this room. Mr.  
09:47:08 24 Rivkin can remind me where it is.

09:47:09 25 MR. RIVKIN: On Friday

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09:47:10 2 morning when we're doing the video  
09:47:12 3 conferencing with the witnesses in  
09:47:14 4 Paris we'll be in a room down the hall,  
09:47:16 5 35N. We won't try to move everything  
09:47:18 6 in this room just for the morning, but  
09:47:20 7 we can move a couple of the Livenote  
09:47:22 8 computers. I understand that you have  
09:47:25 9 already sent to Paris any exhibits that  
09:47:28 10 you plan on using there, but if not,  
09:47:31 11 coordinate that with Carmen and we can  
09:47:34 12 put anything into our office pouch  
09:47:37 13 going today. I think it leaves early  
09:47:39 14 afternoon, and it should arrive there  
09:47:43 15 tomorrow. So if there's anything that  
09:47:46 16 you need to have in our Paris office in  
09:47:49 17 terms of exhibits if you could get them  
09:47:50 18 to Carmen by lunchtime today we'll put  
09:47:53 19 them in our overnight pouch and they  
09:47:57 20 will be there. But we'll move down to  
09:47:59 21 that room for the hearing for the  
09:48:00 22 morning and then come back in here when  
09:48:03 23 we're done with the video conferencing.  
09:48:06 24 It's all set up, Carmen, right, at the  
09:48:08 25 other end in our Paris office.

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09:48:10 2 MS. MARTINEZ LOPEZ: Yes.

09:48:13 3 MR. RIVKIN: As long as I

09:48:15 4 have the mic, let me say too if you

09:48:17 5 need anything else in terms of

09:48:19 6 arrangements just let Carmen and we

09:48:20 7 know. I know you each have a couple of

09:48:22 8 rooms that you can use. If you need

09:48:26 9 any other logistical help just let us

09:48:31 10 know. We will have a small continental

09:48:35 11 breakfast available back in the buffet

09:48:38 12 area each morning before we start which

09:48:41 13 you can take into your rooms, and at

09:48:44 14 lunchtime too we'll have lunch for

09:48:46 15 everybody which you can then -- which

09:48:50 16 will all be set up in, again, the

09:48:52 17 galley behind us and which you can then

09:48:57 18 take wherever you're heading to. But

09:48:59 19 if you need anything else just let us

09:49:02 20 know.

09:49:02 21 The conference room on the

09:49:04 22 far side has been blocked for the week

09:49:06 23 as well for security purposes. So

09:49:10 24 hopefully there shouldn't be any

09:49:12 25 interference.

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09:49:14 2 THE PRESIDENT: The next  
09:49:18 3 topic is witnesses and scheduling.  
09:49:25 4 We're very grateful to the parties for  
09:49:27 5 the way in which they've been  
09:49:28 6 discussing which days witnesses will be  
09:49:31 7 called and so on. I asked Carmen to  
09:49:35 8 attempt the very challenging task of  
09:49:41 9 trying to see based on what you've  
09:49:43 10 written to us and what we know has been  
09:49:45 11 arranged, of how the next days of this  
09:49:49 12 hearing, apart from today, might look,  
09:49:51 13 and she is going to hand that to each  
09:49:53 14 side. I want to make a point about  
09:49:56 15 that this is in no way indicating what  
09:50:01 16 the parties have to do. It's another  
09:50:04 17 attempt on our part to try to give you  
09:50:07 18 some assistance by putting down in  
09:50:09 19 print what it looks like when we take  
09:50:12 20 your indication when witnesses will be  
09:50:14 21 called and how long they will take.

09:50:16 22 So we leave that with you  
09:50:18 23 for your consideration. The basic  
09:50:24 24 rule, as you know, is that each side  
09:50:25 25 has the stipulated time to use as they

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09:50:28 2 wish and you don't have to follow the  
09:50:29 3 schedule, but we thought it might be  
09:50:31 4 helpful if we gave that to you and let  
09:50:33 5 you ponder on it and if you have any  
09:50:35 6 thoughts about it you can let us know.

09:50:36 7 Staying with the subject of  
09:50:41 8 witnesses, I should ask the question as  
09:50:44 9 to whether either counsel has any  
09:50:48 10 request to make about witnesses yet to  
09:50:50 11 be heard. We've not been present in  
09:50:55 12 the hearing room when a previous  
09:50:58 13 witness is giving evidence. The view  
09:51:02 14 the tribunal takes is that obviously in  
09:51:04 15 the case of experts they should be here  
09:51:07 16 to hear what the opposing expert says.  
09:51:11 17 However, it's theoretically possible  
09:51:14 18 that there may be an occasion where one  
09:51:16 19 side or the other says I don't want to  
09:51:19 20 have Mr. X here while Y is being cross  
09:51:23 21 examined. I doubt whether that will be  
09:51:27 22 necessary, but I make that indication  
09:51:28 23 now so that if either side has any  
09:51:30 24 requests of that kind they should  
09:51:32 25 indicate them. Because otherwise we'll

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09:51:34 2 proceed on the basis that all witnesses  
09:51:36 3 are entitled to be in the hearing room  
09:51:38 4 throughout the proceeding.

09:51:39 5 There is one other aspect of  
09:51:42 6 that. If anybody is minded to make  
09:51:44 7 such an application and if it's  
09:51:46 8 granted, in other words, witness X will  
09:51:49 9 not be present, you need to be very  
09:51:50 10 scrupulous about not showing them the  
09:51:52 11 transcript, because it would completely  
09:51:54 12 undermine any order of that kind if we  
09:51:57 13 said witness X was not to be present  
09:52:00 14 and then witness X by accident came to  
09:52:03 15 read the transcript.

09:52:04 16 As I say, the prevailing  
09:52:08 17 rule will be that all witnesses are  
09:52:10 18 entitled to be here unless somebody  
09:52:12 19 else tells us something.

09:52:14 20 MR. SUH: Mr. Chair,  
09:52:15 21 actually at this time, we would move  
09:52:16 22 for witness exclusion and for a  
09:52:19 23 parallel rule that there be no  
09:52:21 24 discussion about the testimony given by  
09:52:22 25 a witness as to testifying witnesses

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09:52:27 2 between the trial team.

09:52:29 3 THE PRESIDENT: I think  
09:52:29 4 we've got two topics here. The general  
09:52:31 5 instruction we will give to a witness  
09:52:33 6 who's in the course of being examined  
09:52:36 7 is that they may not discuss the case  
09:52:37 8 with the team, their legal team. So  
09:52:40 9 that's a given. But I'm talking about  
09:52:42 10 something different as you will  
09:52:43 11 appreciate, which is whether a witness  
09:52:45 12 should be excluded from being present.

09:52:47 13 MR. SUH: I believe I  
09:52:48 14 understand the difference and I believe  
09:52:49 15 that we would request that we have  
09:52:52 16 testifying witnesses not be present  
09:52:54 17 during the testimony of other  
09:52:56 18 witnesses. If I might, I raise the  
09:52:59 19 issue now because you ask about it. If  
09:53:02 20 the panel wishes to reserve judgment on  
09:53:05 21 this ruling following the presentation  
09:53:08 22 of opening statements we'd be fine with  
09:53:10 23 that. But I think that following  
09:53:12 24 opening statements perhaps there might  
09:53:14 25 be --

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09:53:15 2 THE PRESIDENT: Very good.

09:53:16 3 We'll hear from counsel then as to any  
09:53:19 4 applications they have to make.

09:53:20 5 I think I should tell you  
09:53:23 6 however, that it's going to be rather  
09:53:27 7 unlikely that we would preclude, unless  
09:53:31 8 very strong grounds were shown, for  
09:53:35 9 experts being excluded. But you can  
09:53:37 10 come back to that and make your  
09:53:39 11 application; or Mr. Young, if you want.

09:53:41 12 I think that covers all of  
09:53:52 13 the introductory administrative  
09:53:57 14 matters. So we'll in accordance with  
09:54:00 15 today's program -- unless anybody wants  
09:54:02 16 to raise any other administrative  
09:54:04 17 matters with the applications that we  
09:54:08 18 have listed. Do you have any other  
09:54:10 19 administrative matters, Mr. Suh?

09:54:14 20 MR. SUH: Just one. The  
09:54:15 21 panel has directed us to provide the  
09:54:18 22 medical report of Dr. Meier-Augenstein.  
09:54:21 23 We have it in our possession. Given  
09:54:24 24 the requirements of HIPPA and some of  
09:54:26 25 the sensitive nature of what is



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09:54:28 2 contained in the medical report which  
09:54:31 3 is likely, we would request that we be  
09:54:33 4 able to provide that report to the  
09:54:34 5 panel in camera so it not be  
09:54:36 6 distributed to everyone here.

09:54:37 7 THE PRESIDENT: Well, I  
09:54:38 8 think we would be happy to receive it  
09:54:41 9 in camera, but it would be impossible  
09:54:45 10 to proceed on the basis that counsel,  
09:54:48 11 at least one counsel from the other  
09:54:50 12 side doesn't see it.

09:54:51 13 So what we would propose is  
09:54:53 14 that Mr. Young see it. He will observe  
09:54:57 15 strict confidentiality. If he wants to  
09:54:59 16 show it to anybody else he would apply  
09:55:00 17 to us for leave first. But it wouldn't  
09:55:03 18 be appropriate for us to receive any  
09:55:04 19 evidence unilaterally.

09:55:18 20 And if you wish as a  
09:55:19 21 starting point, we would let Mr. Young  
09:55:24 22 read it without giving him a copy. If  
09:55:26 23 he says he wants to copy it for any  
09:55:30 24 purpose or consult with anybody he will  
09:55:32 25 do that with us first. So that will be

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09:55:34 2 a proposal that Mr. Young will read it  
09:55:36 3 and we'll proceed on that basis, but he  
09:55:39 4 will be under an obligation of  
09:55:40 5 confidentiality.

09:55:42 6 MR. SUH: That's fine.

09:55:46 7 THE PRESIDENT: Mr. Young,  
09:55:47 8 do you have any administrative matters  
09:55:48 9 you want to raise?

09:55:50 10 MR. YOUNG: We don't.

09:55:52 11 MR. RIVKIN: I'll raise one  
09:55:53 12 which is I've emailed somebody to see  
09:55:55 13 if they can cool down the room a bit  
09:55:57 14 since others may be warm too.

09:56:05 15 THE PRESIDENT: The chairman  
09:56:05 16 would say that immediately, that you're  
09:56:07 17 free to take off your jackets whenever  
09:56:09 18 you want.

09:56:28 19 The application we are  
09:56:29 20 looking at is relevant to the first  
09:56:33 21 witness and the trail begins with the  
09:56:39 22 Respondent's motion in limine to  
09:56:43 23 exclude. We have had some discussions  
09:56:50 24 about these matters and we have some  
09:56:52 25 provisional views we want to share with

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09:56:54 2 you. We appreciate that the parties,  
09:56:57 3 while these are regarded as important  
09:56:59 4 matters, don't want to spend too much  
09:57:03 5 time on these matters, instead get to  
09:57:06 6 the evidence.

09:57:07 7 But looking at that motion  
09:57:14 8 the first matter is the bottle chain of  
09:57:19 9 custody. The second is the ISO  
09:57:23 10 accreditation. The third is the  
09:57:27 11 aliquot chain of custody. The fourth  
09:57:28 12 is Dr. de Ceaurriz, and then there's  
09:57:34 13 the list of issues and then Dr. Davis.  
09:57:42 14 And our provisional position is that on  
09:57:49 15 the ISO accreditation, we would be  
09:57:54 16 inclined to allow that matter to be  
09:57:57 17 raised and also allow in the evidence  
09:58:02 18 that's been provided from Mr. Wassila  
09:58:07 19 Rahali if I've pronounced it correctly.

09:58:08 20 On the bottle chain of  
09:58:13 21 custody, I'll come back to that. And  
09:58:16 22 the same with aliquot.

09:58:19 23 As to Dr. de Ceaurriz, we  
09:58:21 24 would prefer to defer that matter  
09:58:22 25 because it may or may not arise. Mr.

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09:58:25 2 Suh has indicated that it's something  
09:58:27 3 he wants to reflect on during the  
09:58:30 4 hearing and we don't want to take time  
09:58:32 5 deciding something that may not have to  
09:58:34 6 be decided.

09:58:35 7 As to the list of issues,  
09:58:39 8 we've noted what was said there. That  
09:58:42 9 may be influenced by our rulings on  
09:58:43 10 some of these matters, so we don't  
09:58:45 11 propose to spend any time on it.

09:58:47 12 On the objection to  
09:58:49 13 Dr. Davis performing a live  
09:58:51 14 demonstration, we have noted that the  
09:58:53 15 Appellant no longer pursues its request  
09:58:57 16 to have a demonstration in the course  
09:58:59 17 of opening. A view we take of Dr.  
09:59:02 18 Davis performing a live demonstration  
09:59:04 19 is that it should be allowed but we  
09:59:07 20 should have a clear understanding in  
09:59:08 21 advance of what is going to happen.  
09:59:13 22 And in that regard, we would, since  
09:59:19 23 it's already happened once, counsel  
09:59:21 24 must have a fair idea about it, but we  
09:59:23 25 would like Mr. Young to have the

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09:59:25 2 opportunity to indicate whether there  
09:59:26 3 are any particular aspects of that he  
09:59:28 4 wants the tribunal to consider in  
09:59:30 5 advance by way of procedure, but  
09:59:33 6 subject to giving him the opportunity  
09:59:35 7 to indicate if there are any particular  
09:59:38 8 matters that he wants to be observed  
09:59:42 9 and hearing Mr. Suh in reply on that,  
09:59:45 10 our view is that Dr. Davis should be  
09:59:47 11 allowed to perform a demonstration.

09:59:49 12 The ones then upon which we  
09:59:59 13 would like to hear counsel briefly this  
10:00:01 14 morning, we're very grateful for their  
10:00:06 15 memoranda, but we want to hear them  
10:00:08 16 briefly, five minutes each will  
10:00:10 17 probably be enough on the bottle chain  
10:00:12 18 of custody and the aliquot chain of  
10:00:15 19 custody. And the basic question we  
10:00:17 20 have for the parties is whether those  
10:00:20 21 two matters are squarely before us  
10:00:24 22 taking into account the relevant CAS  
10:00:28 23 rules and especially the very explicit  
10:00:35 24 Rule 56 about the appeal and answer  
10:00:38 25 being complete.

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10:00:40 2 So Mr. Suh, would you like  
10:00:42 3 to lead off and give us a summary of  
10:00:44 4 your views. Well, forgive me. It's  
10:00:50 5 your application, Mr. Young. It's your  
10:00:53 6 application, Mr. Young. So I'm going  
10:00:54 7 ahead of myself. You should speak  
10:00:56 8 briefly to the bottle chain of custody  
10:01:00 9 and the aliquot chain of custody  
10:01:02 10 because you're the one seeking to  
10:01:04 11 exclude them.

10:01:06 12 MR. SUH: Mr. Chair, before  
10:01:08 13 Mr. Young proceeds, after some thought,  
10:01:09 14 we have decided in large part due to  
10:01:12 15 time constraints to not pursue aliquot  
10:01:17 16 chain of custody and just focus on  
10:01:19 17 bottle chain of custody.

10:01:22 18 THE PRESIDENT: Thank you.  
10:01:23 19 We note that and we appreciate why you  
10:01:25 20 take that position. So you can confine  
10:01:28 21 yourself, Mr. Young, to the section A  
10:01:31 22 of your motion, the B bottle chain of  
10:01:35 23 custody.

10:01:38 24 MR. BARNETT: If I may, can  
10:01:39 25 I ask one point of clarification?

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10:01:41 2 THE PRESIDENT: Yes.

10:01:42 3 MR. BARNETT: With respect

10:01:43 4 to the accreditation documents or

10:01:44 5 arguments that you allowed in, I

10:01:46 6 believe you said that the testimony of

10:01:47 7 Mr. Rahali was also admitted. Did you

10:01:51 8 perhaps mean the statement of Mr.

10:01:53 9 Leguy?

10:01:53 10 THE PRESIDENT: Yes, I did.

10:01:54 11 Forgive me for that. So in other

10:01:59 12 words, the Appellant's application is

10:02:06 13 granted in that respect, but equally

10:02:09 14 the Appellant's motion to strike that

10:02:11 15 evidence is refused.

10:02:15 16 MR. SUH: And with respect

10:02:15 17 to Mr. Leguy, he will of course be made

10:02:18 18 available for cross examination?

10:02:20 19 THE PRESIDENT: I have no

10:02:20 20 idea myself what is the position, but

10:02:22 21 in view of the fact that he's being

10:02:24 22 tendered that would be your right.

10:02:28 23 MR. BARNETT: And our

10:02:29 24 position is we will do our best to make

10:02:31 25 him available by telephone. It would

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10:02:33 2 not be possible to get him here in  
10:02:35 3 person as they've requested.

10:02:36 4 THE PRESIDENT: Where is he?

10:02:38 5 MR. YOUNG: Paris. And the  
10:02:39 6 problem is this is Easter weekend  
10:02:43 7 holiday with Saturday, Sunday, Monday  
10:02:48 8 off in Paris.

10:02:49 9 THE PRESIDENT: Yes, we're  
10:02:50 10 conscious of the fact that this  
10:02:51 11 tribunal is going to make a lot of  
10:02:52 12 people unhappy around the world by  
10:02:54 13 bringing them here over Easter, but  
10:02:56 14 there we are.

10:03:07 15 MR. BARNETT: With respect  
10:03:07 16 to bottle chain of custody, we do  
10:03:10 17 believe that these issues fall squarely  
10:03:12 18 within CAS rule R-56, which sets forth  
10:03:16 19 that other than exceptional  
10:03:18 20 circumstances there will not be a  
10:03:19 21 supplement. We believe that  
10:03:24 22 Appellant's argument essentially boils  
10:03:26 23 down to a request for a reply brief  
10:03:28 24 which is not provided for in the CAS  
10:03:30 25 rules. There is nothing new about the



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10:03:33 2 documents upon which their arguments  
10:03:35 3 are based, and with a full opportunity  
10:03:37 4 to include those arguments in their  
10:03:40 5 first appeal brief as required by the  
10:03:42 6 rules, they chose not to. And  
10:03:44 7 specifically in their brief they raised  
10:03:47 8 nine specific bottle chain of custody  
10:03:49 9 issues. That was their choice. That's  
10:03:51 10 what they focused and narrowed the  
10:03:53 11 panel's attention to.

10:03:54 12 THE PRESIDENT: Could you  
10:03:55 13 just give us the page reference there,  
10:03:57 14 please.

10:03:58 15 MR. YOUNG: It's Page 70.  
10:04:17 16 That's off the top of my head, but I  
10:04:18 17 think that's right.

10:04:20 18 MR. BARNETT: He's pretty  
10:04:21 19 good. It begins on Page 70. And of  
10:04:24 20 note, it begins with "On July 21st" and  
10:04:28 21 continues chronologically thereafter.  
10:04:31 22 At no time did they raise any issue as  
10:04:34 23 to problems before July 21st which is  
10:04:36 24 now the supplement that they seek to  
10:04:39 25 add.

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10:04:40 2 Again, our issue here is not  
10:04:43 3 that there aren't answers for the new  
10:04:45 4 issues they've raised. Our problem is  
10:04:48 5 that both in the hearing before and now  
10:04:49 6 in this proceeding Appellant's favorite  
10:04:53 7 argument seems to be the one we haven't  
10:04:55 8 seen yet and it's a moving target and  
10:04:57 9 it's a moving target that seems to be  
10:05:00 10 once we dispel one argument another  
10:05:03 11 pops up. The CAS rules are clear that  
10:05:04 12 such tactics shouldn't be allowed, and  
10:05:07 13 there's no exceptional circumstances  
10:05:09 14 supported other than their request for  
10:05:11 15 a chance to reply again. If that was  
10:05:15 16 what exceptional circumstances meant  
10:05:17 17 under the CAS rule, then the exception  
10:05:18 18 would swallow the rule, and we think  
10:05:21 19 the CAS rules are clear and should be  
10:05:22 20 enforced as to bottle chain of custody.

10:05:26 21 THE PRESIDENT: Mr. Suh.

10:05:28 22 MR. SUH: My colleague, Mr.  
10:05:29 23 Weiss, is going to argue this motion.

10:05:32 24 MR. WEISS: Good morning,  
10:05:34 25 panel. What we're asking the panel to

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10:05:37 2 do is to make it so that the Appellant  
10:05:39 3 when they file their brief has to set  
10:05:42 4 forth their substantive arguments, then  
10:05:44 5 imagine every defense that might be  
10:05:46 6 raised in response to their substantive  
10:05:48 7 arguments, and then in addition to  
10:05:50 8 that, defeat all the allegations in  
10:05:53 9 defense by the Appellant.

10:05:56 10 Mr. Barnett is correct, CAS  
10:05:58 11 rules do not permit for an Appellant to  
10:06:01 12 file a reply brief. But what Mr.  
10:06:04 13 Barnett leaves out is that that means  
10:06:07 14 the Appellee can set forth allegations  
10:06:10 15 and statements, whether supported or  
10:06:13 16 unsupported, in their brief and leaves  
10:06:15 17 no chance for the Appellant to  
10:06:18 18 challenge their statements. And that's  
10:06:20 19 exactly what happened here.

10:06:22 20 Appellee set forth in its  
10:06:24 21 brief that all chain of custody or  
10:06:26 22 movement of the sample bottles, A and  
10:06:29 23 B, relying on the statement by the AAA  
10:06:33 24 panel could be accounted for by the  
10:06:35 25 documents in the laboratory packet.

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10:06:38 2 That is simply not true. The Appellant  
10:06:41 3 has, should have an opportunity to  
10:06:44 4 respond to that allegation.

10:06:47 5 By responding to that  
10:06:48 6 allegation Dr. Goldberger has put  
10:06:51 7 forward information that the laboratory  
10:06:53 8 doc pack does not support the movement  
10:06:55 9 of the B chain of custody, or the B  
10:06:57 10 sample bottle. Appellant has every  
10:07:01 11 right and due process and fundamental  
10:07:04 12 fairness to challenge the statements in  
10:07:07 13 Appellee's brief. If that right is not  
10:07:10 14 afforded to him, the Appellant will  
10:07:12 15 never be given an opportunity to  
10:07:14 16 challenge the statements made by the  
10:07:17 17 Appellee and that is simply  
10:07:20 18 fundamentally unfair.

10:07:22 19 It should also be pointed  
10:07:23 20 out that on Page 70 of the brief  
10:07:26 21 Appellant says there's no fewer than  
10:07:28 22 nine breaks in the chain of custody.  
10:07:30 23 It is not limited to a specific nine  
10:07:33 24 instances.

10:07:35 25 Now what's happening here is

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10:07:38 2 USADA has set forth a statement that  
10:07:40 3 they simply can't support and what  
10:07:43 4 they're trying to do is play defense by  
10:07:45 5 an aggressive offense. They're asking  
10:07:48 6 this panel to disregard evidence that  
10:07:53 7 clearly contradicts their statement  
10:07:55 8 that the sample B bottle can be  
10:07:57 9 accounted for by the laboratory  
10:07:59 10 documentation. Appellant has a right  
10:08:03 11 to refute this statement.

10:08:05 12 Thank you.

10:08:07 13 MR. RIVKIN: Mr. Weiss, as I  
10:08:11 14 understand your argument, you say you're  
10:08:13 15 just responding to their defense. Their  
10:08:16 16 defense -- if we limited their defense to  
10:08:23 17 a rebuttal of the nine points in your  
10:08:27 18 brief and the evidence that you had  
10:08:30 19 submitted with respect to the chain of  
10:08:33 20 custody, wouldn't that solve the problem  
10:08:37 21 so that you would not be introducing  
10:08:40 22 additional problems, which you had the  
10:08:45 23 ability to raise earlier, but on the  
10:08:48 24 other hand we wouldn't take any  
10:08:50 25 statements from Appellee that are broader

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10:08:53 2 than simply responding to the issues that  
10:08:55 3 you raise. Since it is as Appellant your  
10:09:01 4 obligation to raise the problems that you  
10:09:03 5 want us to consider, you raise them,  
10:09:07 6 USADA answered, if they answered more  
10:09:10 7 broadly than they needed to, we could  
10:09:12 8 solve the problem you describe by just  
10:09:14 9 taking their response as limited to the  
10:09:15 10 points that you have raised.

10:09:18 11 MR. WEISS: Mr. Rivkin, what  
10:09:20 12 USADA's asking is that every subsection  
10:09:23 13 of every major argument must be  
10:09:25 14 accounted for in their brief. But when  
10:09:28 15 we look at the arguments being  
10:09:30 16 presented by Appellee with respect to  
10:09:32 17 the other chain of custody, in their  
10:09:35 18 brief they have never set forth that  
10:09:38 19 testimony will supplement the  
10:09:40 20 laboratory documentation package.

10:09:41 21 However, in the reply briefs  
10:09:43 22 they have submitted several -- reply  
10:09:45 23 declarations, they have submitted  
10:09:47 24 several declarations and are now  
10:09:49 25 seeking to have testimony to fill in

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10:09:51 2 the gaps of the chain of custody.

10:09:55 3 So if you're asking whether  
10:09:56 4 Appellant had to have every subsection  
10:10:01 5 of every major argument, then Appellant  
10:10:05 6 would ask that the Appellee be subject  
10:10:07 7 to the same standard, that every  
10:10:10 8 subsection and every subargument must  
10:10:11 9 have been submitted in their brief, and  
10:10:13 10 that is simply not the case.

10:10:15 11 And with respect to  
10:10:16 12 accreditation it's the same issue.  
10:10:18 13 They make an argument that they are  
10:10:19 14 accredited, that they have ISO  
10:10:24 15 accreditation, but there's no support  
10:10:25 16 in their brief for that. Now they've  
10:10:27 17 come back and presented the declaration  
10:10:29 18 of Mr. Leguy. They've never made a  
10:10:31 19 subsection argument in their  
10:10:32 20 accreditation argument that they can  
10:10:34 21 supplements the accreditation documents  
10:10:36 22 or alter them, or explain the  
10:10:38 23 accreditation documents by testimony.  
10:10:40 24 And again, if Appellant is held to the  
10:10:43 25 standard of setting forth every

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10:10:45 2 subargument within a major argument,  
10:10:47 3 Appellant simply asks that USADA be  
10:10:50 4 held to that same standard.

10:10:55 5 MR. SUH: May I make one  
10:10:56 6 additional comment? It in part is due to  
10:10:59 7 the unique nature of this litigation. I  
10:11:03 8 think as the panel is well aware, that  
10:11:05 9 this case really has arisen much more --  
10:11:08 10 it's not so much akin as to the trial of  
10:11:10 11 one case and the appeal of that case, but  
10:11:13 12 one long case that has stretched out from  
10:11:15 13 the beginning to the end. And again, I  
10:11:17 14 believe our opening statements will be  
10:11:18 15 very instructive on this issue.

10:11:20 16 The reality is the  
10:11:22 17 declarations that were submitted by  
10:11:24 18 USADA in fact do respond and they  
10:11:28 19 respond to statements that are in the  
10:11:31 20 brief and the reply declarations in a  
10:11:35 21 very broad manner.

10:11:37 22 We are not asking for a new  
10:11:41 23 issue to come up. Clearly, chain of  
10:11:43 24 custody as a subject and a topic has  
10:11:45 25 been a matter of lively debate



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10:11:49 2 throughout the entire course of this  
10:11:50 3 litigation. Everybody is aware that  
10:11:52 4 chain of custody has been an issue.  
10:11:54 5 And I think the central point is that  
10:11:56 6 if we were to parse out this subissue  
10:12:00 7 argument we would be able to go through  
10:12:02 8 their declarations and start cutting  
10:12:04 9 out subparts of their case in such a  
10:12:07 10 way that at the end of the day this  
10:12:09 11 will not benefit the panel's  
10:12:12 12 decisionmaking ability. Because all of  
10:12:14 13 these issues are frankly intertwined  
10:12:16 14 one with another. I mean they're  
10:12:19 15 closely intertwined.

10:12:21 16 And again, one of the things  
10:12:22 17 that I would encourage the panel to do  
10:12:23 18 if the panel is -- while the panel is  
10:12:27 19 weighing this issue is to see the way  
10:12:29 20 this case has unfolded and in large  
10:12:32 21 part this will be made perhaps a bit  
10:12:33 22 more clear during the opening  
10:12:35 23 statements. And these issues having  
10:12:36 24 been closely intertwined with  
10:12:38 25 themselves over the course of the

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10:12:40 2 better part of the year, makes this  
10:12:42 3 litigation very unusual and I think it  
10:12:43 4 well qualifies under the extraordinary  
10:12:47 5 circumstances portion of the CAS rules.

10:12:55 6 MR. PAULSSON: I apologize,  
10:12:56 7 but I'm just trying to understand, Mr.  
10:12:58 8 Weiss, what your argument was. And I  
10:13:00 9 think my question is Mr. Rivkin's. If  
10:13:03 10 you have made nine specific allegations  
10:13:07 11 of breaks in the chain as you have, and  
10:13:12 12 the answer to that is that each of  
10:13:14 13 those allegations is incorrect and  
10:13:16 14 moreover there were no other, or there  
10:13:18 15 were none and the lab pack is complete,  
10:13:23 16 wouldn't the position be that that  
10:13:25 17 additional answer is simply irrelevant  
10:13:27 18 because you haven't made claims beyond  
10:13:29 19 those nine and so we should investigate  
10:13:32 20 whether those nine affirmations that  
10:13:33 21 you make are correct or not and what  
10:13:36 22 they say about number 11 and 20 or any  
10:13:39 23 imaginable number of chains is simply  
10:13:41 24 an irrelevancy because those are not  
10:13:43 25 what you're focusing on. So I don't

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10:13:45 2 understand the concept of subissue, if  
10:13:47 3 you could help me.

10:13:49 4 MR. WEISS: One of the  
10:13:50 5 arguments that Appellant has put  
10:13:53 6 forward on chain of custody is a broad  
10:13:55 7 argument that the laboratory fails to  
10:13:58 8 monitor and record all intra-laboratory  
10:14:02 9 transfers. If what we're saying is  
10:14:04 10 that the laboratory fails to mark and  
10:14:07 11 record when one person has the bottle  
10:14:09 12 and then transfers the bottle to  
10:14:11 13 another person, the controls out. So I  
10:14:14 14 think at the broad level, Appellant has  
10:14:16 15 made an argument that the documentation  
10:14:17 16 provided by LNDD does not record any of  
10:14:24 17 the intra-laboratory transfers, or at  
10:14:25 18 least a very small number of them.

10:14:29 19 Now, within this broader  
10:14:30 20 argument that the method of failing to  
10:14:34 21 record intra-laboratory transfers, which  
10:14:36 22 is exactly what happened with the sample  
10:14:38 23 B bottle, the sample B bottle was  
10:14:40 24 received by the laboratory and then from  
10:14:42 25 that there was never any documentation,

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10:14:44 2 there was never an instance where there  
10:14:46 3 was any laboratory document that  
10:14:49 4 establishes when that bottle was  
10:14:50 5 transferred. Again, there's no  
10:14:53 6 documentation of intra-laboratory  
10:14:56 7 transfers. So this is --

10:14:58 8 MR. PAULSSON: So does that  
10:14:59 9 vice, the general vice which you  
10:15:03 10 contend was extant, affect some or all  
10:15:06 11 of your nine complaints?

10:15:08 12 MR. WEISS: The nine  
10:15:09 13 complaints was a specific sublisting of  
10:15:14 14 instances. Again, the Appellant used the  
10:15:16 15 words "no fewer than" to supplement the  
10:15:18 16 broad argument.

10:15:20 17 MR. PAULSSON: I understand.  
10:15:22 18 But does the general deficiency in  
10:15:24 19 recordkeeping affect some or all of the  
10:15:26 20 nine specific instances?

10:15:27 21 MR. WEISS: It affects some  
10:15:28 22 of the nine instances. There are some  
10:15:29 23 other deficiencies with the nine  
10:15:32 24 instances as well.

10:15:32 25 MR. PAULSSON: Of course.

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10:15:33 2 But they affect some of the nine  
10:15:35 3 deficiencies. Thank you.

10:15:37 4 THE PRESIDENT: Mr. Young,  
10:15:38 5 briefly in reply and the tribunal will  
10:15:41 6 deliberate briefly.

10:15:42 7 MR. YOUNG: I think the  
10:15:44 8 questions that were asked were well  
10:15:46 9 placed. There's a misnomer here that  
10:15:50 10 talks about USADA's defense. That  
10:15:53 11 isn't how this works. The rules say  
10:15:55 12 that the laboratory procedures are  
10:15:58 13 presumed to have followed the  
10:15:59 14 International Standard. It's the  
10:16:01 15 athlete's burden to show that they were  
10:16:04 16 violated. The athlete has come forward  
10:16:07 17 with the appeal brief and listed nine  
10:16:10 18 specific ways in which they think the  
10:16:12 19 International Standard was violated.  
10:16:16 20 And USADA responded to those nine  
10:16:18 21 points.

10:16:18 22 The argument that this  
10:16:27 23 wasn't somehow identified in USADA's  
10:16:32 24 reply brief, if you look at the witness  
10:16:36 25 designation in USADA's reply brief, we

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10:16:39 2 designated a number of witnesses to  
10:16:41 3 talk about chain of custody, but those  
10:16:44 4 were the witnesses who had the bottle  
10:16:46 5 after July 20 because those were the  
10:16:51 6 points that they raised as a violation  
10:16:54 7 of the ISL. We didn't raise -- we  
10:16:58 8 didn't initially list a witness on July  
10:17:01 9 20 because they hadn't raised the  
10:17:03 10 point.

10:17:05 11 THE PRESIDENT: Very well.  
10:17:06 12 We will take a short adjournment.  
10:17:09 13 There's one thing I wanted to mention  
10:17:11 14 in relation to what Mr. Suh has said,  
10:17:14 15 which I might as well say it while it's  
10:17:17 16 fresh. You are saying, Mr. Suh, that  
10:17:20 17 it would be very interesting for us to  
10:17:23 18 understand how the matter played out in  
10:17:25 19 the earlier case. You're of course  
10:17:30 20 perfectly entitled to do that and there  
10:17:31 21 may be some aspects of it, especially  
10:17:33 22 as to particular witnesses, which are  
10:17:36 23 of real importance. Speaking for  
10:17:39 24 myself, I'm not sure that I'm  
10:17:42 25 interested in an exact recounting of

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10:17:46 2 the whole process because we are a de  
10:17:49 3 novo tribunal. So I just make that  
10:17:51 4 point. Selectively I can fully  
10:17:53 5 understand it, but I don't think it  
10:17:55 6 would be useful to tell us the whole  
10:17:57 7 story because we are directed to  
10:17:59 8 conduct a de novo hearing.

10:18:02 9 MR. SUH: Believe me, I've  
10:18:03 10 lost several years off my life from the  
10:18:06 11 first proceeding. That's not the point  
10:18:07 12 actually to recount the entirety of the  
10:18:10 13 first hearing. That's not what we  
10:18:11 14 intend to do at all.

10:18:12 15 THE PRESIDENT: I'm sure you  
10:18:13 16 don't.

10:18:14 17 MR. SUH: There are certainly  
10:18:16 18 selective parts of it which are very  
10:18:18 19 informative. Again, if this rule does  
10:18:20 20 stand that only the specific responses to  
10:18:22 21 the very specific things that have been  
10:18:24 22 raised is applied, we would ask that it  
10:18:26 23 be applied equally against USADA because  
10:18:30 24 we can come up with several instances in  
10:18:33 25 which their declarations have raised

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10:18:35 2 issues and witnesses which stand outside.

10:18:38 3 Frankly, we never thought

10:18:39 4 that this --

10:18:42 5 THE PRESIDENT: I think

10:18:42 6 we've already given one in your favor

10:18:45 7 this morning which is the USADA

10:18:48 8 accreditation.

10:18:52 9 MR. RIVKIN: Not the USADA.

10:18:54 10 The lab accreditation.

10:18:56 11 THE PRESIDENT: The lab

10:18:58 12 accreditation. So you're doing okay so

10:18:59 13 far.

10:19:00 14 There's one other you may

10:19:02 15 think fussy matter I wanted to mention.

10:19:06 16 Both sides in this argument this

10:19:07 17 morning have had more than one counsel

10:19:10 18 speak. That is perfectly acceptable.

10:19:12 19 We have no problem with that. There is

10:19:14 20 a problem which I have encountered in

10:19:17 21 other situations where you have a

10:19:20 22 suggestion that there should be more

10:19:22 23 than one cross examiner of a witness

10:19:25 24 and the rule that I think, speaking for

10:19:27 25 myself, that we should follow is that



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10:19:31 2 it will be one cross examiner unless  
10:19:33 3 there is a witness covering a large  
10:19:37 4 field where it can be divided. But the  
10:19:39 5 idea of having more than one cross  
10:19:41 6 examiner beating away at the poor  
10:19:44 7 witness in succession is something that  
10:19:48 8 we wouldn't be interested in.

10:19:50 9 Anyway, we'll take a short  
10:19:53 10 adjournment while we consider this  
10:19:54 11 matter.

10:19:55 12 I'm very sorry, I keep  
10:19:58 13 remembering important things. We had a  
10:20:00 14 discussion this morning about the  
10:20:01 15 question of how to deal with -- how the  
10:20:04 16 Appellant should deal with the rebuttal  
10:20:06 17 evidence. So, for example, you call  
10:20:08 18 your first witness, Dr. Goldberger, and  
10:20:12 19 there has been a rebuttal statement or  
10:20:15 20 maybe more than one in relation to that  
10:20:17 21 witness. Although the time schedule  
10:20:25 22 presently provides that you would, Mr.  
10:20:27 23 Suh, just simply ask him to confirm his  
10:20:32 24 statement because there's only five  
10:20:36 25 minutes allowed, we've come to the view

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10:20:38 2 that it may be more convenient in  
10:20:42 3 examination in chief for you to go to  
10:20:44 4 the rebuttal statements and say, Dr.  
10:20:50 5 Goldberger, you've seen the rebuttal  
10:20:52 6 statement of X, is there any comment  
10:20:53 7 you want to make in the following three  
10:20:55 8 topics, so that we don't then have to  
10:20:58 9 come back and do all that afterwards.

10:21:00 10 Now I don't know what Mr.  
10:21:01 11 Young thinks about that, but we think  
10:21:03 12 that this would apply to both sides,  
10:21:05 13 more particularly apply to the  
10:21:07 14 Appellant, that it may be more  
10:21:09 15 efficient, although it's your time so  
10:21:10 16 you decide, to do that in examination  
10:21:14 17 in chief. It will make for a more  
10:21:16 18 efficient process.

10:21:18 19 MR. SUH: If I understand  
10:21:19 20 correctly, just on redirect that the  
10:21:22 21 witness be allowed -- on redirect --

10:21:26 22 THE PRESIDENT: No, I was  
10:21:27 23 going to say when you first bring your  
10:21:28 24 witness up. So Mr. Goldberger will  
10:21:31 25 come up, he would confirm his statement

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10:21:32 2 and then you would show him a rebuttal  
10:21:34 3 statement and say you've seen what's  
10:21:36 4 said about your opinion on Page 5, do  
10:21:39 5 you have any comment on that, and that  
10:21:41 6 would be done before the cross  
10:21:44 7 examination.

10:21:45 8 MR. SUH: I see.

10:21:46 9 THE PRESIDENT: And then the  
10:21:47 10 reexamination will be limited to the  
10:21:51 11 cross examination because all of that  
10:21:54 12 rebuttal material -- not all of it, but  
10:21:57 13 the key things that are being said  
10:21:59 14 against the witness would have been put  
10:22:00 15 on the table.

10:22:01 16 Anyway, while we're away you  
10:22:03 17 two might like to talk about that.

10:22:05 18 MR. SUH: Mr. Barnett and I  
10:22:06 19 had a conversation about this a little  
10:22:09 20 bit, not in this level of detail, but  
10:22:11 21 we had discussed the issue of waiving  
10:22:13 22 the initial brief direct examination in  
10:22:15 23 order to save time. In other words,  
10:22:16 24 have simply -- because we are very  
10:22:18 25 short on time. So we have the cross

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10:22:20 2 examination go first, the redirect come  
10:22:22 3 afterwards, two pieces, we're done.

10:22:27 4 THE PRESIDENT: Well --

10:22:28 5 MR. PAULSSON: That doesn't  
10:22:29 6 necessarily save time if you have  
10:22:31 7 matters on rebuttal from the cross  
10:22:34 8 written statements.

10:22:35 9 MR. SUH: That's true, just  
10:22:36 10 the transaction time of having counsel  
10:22:38 11 come up. Because the way it was set up  
10:22:39 12 it was five minutes in the beginning.

10:22:42 13 THE PRESIDENT: That was to  
10:22:43 14 give the witness a chance to confirm  
10:22:45 15 his statement and make any corrections  
10:22:46 16 before the cross examination takes  
10:22:48 17 place.

10:22:49 18 MR. BARNETT: Our discussion  
10:22:50 19 was before the idea of having them  
10:22:51 20 address the rebuttal testimony first.  
10:22:54 21 From a procedural matter it does seem  
10:22:57 22 to me to make sense that the witness be  
10:22:59 23 given that opportunity to address the  
10:23:01 24 rebuttal testimony and I guess we would  
10:23:04 25 prefer to go with that suggestion.

1 P R O C E E D I N G S

10:23:06 2 MR. RIVKIN: Otherwise you  
10:23:07 3 may find yourself rebutting what was in  
10:23:09 4 somebody else's witness statement as  
10:23:11 5 part of redirect and they do a recross  
10:23:13 6 and it will actually take longer.  
10:23:15 7 Obviously you don't have to use any  
10:23:17 8 time to rebut what is in the other  
10:23:19 9 statements, but if there is  
10:23:22 10 something you want your witness to  
10:23:23 11 rebut it ought to be before the cross.

10:23:26 12 THE PRESIDENT: Obviously as  
10:23:27 13 to the first witness, if we decide to  
10:23:29 14 take that approach, since this is  
10:23:31 15 something that's being announced now,  
10:23:32 16 it would give you some time, Mr. Suh,  
10:23:34 17 to be with your witness before he's  
10:23:36 18 called, to sort out which of the issues  
10:23:38 19 he wants to discuss. We'll give you  
10:23:40 20 noncounting time to do that because  
10:23:42 21 it's something that has arisen from  
10:23:43 22 what we're doing, suggesting.

10:23:46 23 MR. SUH: Thank you.

10:23:47 24 MR. BARNETT: May I also ask  
10:23:49 25 one point of clarification on your

1 P R O C E E D I N G S

10:23:50 2 ruling regarding accreditation. My  
10:23:52 3 understanding is the only thing you've  
10:23:53 4 ruled on at this point is to deny our  
10:23:56 5 motion in limine regarding those  
10:23:57 6 subjects?

10:23:58 7 THE PRESIDENT: Correct,  
10:23:59 8 correct. And also to allow you to call  
10:24:02 9 the witness you want to call.

10:24:04 10 MR. BARNETT: Thank you.

10:24:05 11 (A recess was taken.)

10:37:16 12 THE PRESIDENT: We've now  
10:37:19 13 resumed. I've heard that it's not easy  
10:37:23 14 to hear at the back. Is that better?  
10:37:26 15 Okay. If at any stage we get out of  
10:37:30 16 your sound range because I've forgotten  
10:37:35 17 about this, please let me know.

10:37:36 18 The tribunal has deliberated  
10:37:42 19 on the question of the motion in limine  
10:37:43 20 so far as it refers to section A on  
10:37:46 21 Page 2, B bottle chain of custody on  
10:37:50 22 July 20th, 2006 and 9H35 sample receipt  
10:37:55 23 time, we have decided that the motion  
10:37:59 24 should be upheld. As a consequence,  
10:38:03 25 the paragraphs 54 and 55 of Dr.

1 P R O C E E D I N G S

10:38:08 2 Goldberger's statement will not be  
10:38:11 3 received.

10:38:13 4 There is a brief reference  
10:38:14 5 to the topic in paragraph 51, but it's  
10:38:16 6 really paragraph 54 and 55.

10:38:19 7 We stress that nothing in  
10:38:23 8 what we say in any way limits the chain  
10:38:27 9 of custody arguments which Appellant  
10:38:31 10 has raised and on which it plans to  
10:38:34 11 present evidence. So that concludes  
10:38:38 12 the first section of the timetable. We  
10:38:41 13 have some more motions to deal with at  
10:38:43 14 the end of the day, but we're in a  
10:38:45 15 position, Mr. Suh, to hear your opening  
10:38:49 16 statement if you'd. Five minutes to  
10:38:52 17 get yourself organized that's fine, or  
10:38:54 18 if you're ready to go, we're happy to  
10:38:58 19 hear you.

10:38:59 20 MR. SUH: Let me just check  
10:39:01 21 with Mr. Thompson. I assume we may use  
10:39:05 22 the lectern, is that preferable to the  
10:39:07 23 panel?

10:39:07 24 THE PRESIDENT: Yes, of  
10:39:08 25 course. Whatever suits you will be

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10:39:10 2 fine. Please begin.

10:39:43 3 MR. SUH: May it please the  
10:39:44 4 panel and counsel. This case has been  
10:39:49 5 and it always will be about a series of  
10:39:53 6 disastrous errors committed by LNDD,  
10:39:56 7 errors that go to the very fundamental  
10:39:58 8 testing processes that resulted in a  
10:40:01 9 false positive in this case.

10:40:03 10 But in particular, as this  
10:40:06 11 case has progressed, to this point it  
10:40:09 12 has become truly about the credibility  
10:40:12 13 and the integrity of LNDD and its  
10:40:16 14 procedures, and bluntly, LNDD's and  
10:40:20 15 USADA's attempts to cover up the errors  
10:40:23 16 that LNDD committed. It gives me no  
10:40:25 17 pleasure to make that statement.

10:40:28 18 Although we all hear a lot  
10:40:31 19 about science and will hear a lot about  
10:40:33 20 science over the coming few tests and  
10:40:36 21 the testing methods and testing  
10:40:38 22 theories in this case, this is actually  
10:40:40 23 a very human story. It's a story about  
10:40:42 24 truth and it's a story about falsity.  
10:40:45 25 And at this point, for USADA and LNDD



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10:40:49 2 it is a story about falsity.

10:40:51 3 LNDD's errors and its later  
10:40:55 4 attempts to cover up their errors have  
10:40:57 5 had also a very human dimension. They  
10:41:00 6 have led to destruction of Appellant's  
10:41:02 7 career in many ways, his life over the  
10:41:05 8 past, since this false positive was  
10:41:08 9 returned.

10:41:08 10 It is undeniable that many  
10:41:11 11 things went wrong in connection with  
10:41:13 12 the testing of Appellant's sample.  
10:41:16 13 Some were small, many are major  
10:41:18 14 problems that go to the heart of the  
10:41:19 15 accuracy of these test results.

10:41:21 16 Let us not forget that the  
10:41:24 17 T/E test has already been thrown out  
10:41:26 18 because the violation of the ISL, a  
10:41:29 19 simple rule. The T/E test is a basic,  
10:41:32 20 routine test performed around the world  
10:41:33 21 in ante doping laboratories for over 20  
10:41:36 22 years. And yet, the LNDD could not get  
10:41:40 23 that one test right.

10:41:41 24 Let us not also forget that  
10:41:44 25 even the panel below whose decision and

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10:41:46 2 reasoning was fundamentally flawed,  
10:41:49 3 even said that, "If such practices  
10:41:53 4 continue," referring to the forensic  
10:41:55 5 corrections, "it may well be that in  
10:41:57 6 the future an error like this could  
10:41:59 7 result in the dismissal of an AAF  
10:42:01 8 finding by the lab."

10:42:02 9 What you will see and hear  
10:42:06 10 today are two things. You will hear a  
10:42:08 11 summary of the issues that you will  
10:42:10 12 hear about over the coming days. Those  
10:42:11 13 issues are failed quality control;  
10:42:18 14 identification, bad chromatography and  
10:42:21 15 manual processing, other ISL  
10:42:24 16 violations, and chain of custody.

10:42:25 17 These issues have remained  
10:42:29 18 the same. What we are going to point  
10:42:32 19 out is how the responses to these  
10:42:34 20 issues have changed. The response to  
10:42:36 21 these issues changing is going to tell  
10:42:39 22 you something critical about this case  
10:42:42 23 because I'm sure as the panel has  
10:42:45 24 noted, ultimately this case comes down  
10:42:47 25 to one of credibility.

## 1 P R O C E E D I N G S

10:42:48 2 If you lay up one party's  
10:42:51 3 set of declarations on the one side and  
10:42:54 4 another set of party's declarations on  
10:42:56 5 the other side, you will see that they  
10:42:58 6 say diametrically opposite things. And  
10:43:01 7 it is on the science admittedly for me,  
10:43:05 8 especially because I don't have a  
10:43:06 9 science background, extraordinarily  
10:43:08 10 difficult to puzzle your way through  
10:43:10 11 them.

10:43:10 12 The guide to puzzling your  
10:43:12 13 way through them will be to see how  
10:43:14 14 their stories have changed and how they  
10:43:16 15 are inconsistent with the facts in this  
10:43:18 16 case.

10:43:18 17 Let's turn quickly to the  
10:43:21 18 standard of proof. The standard of  
10:43:25 19 course under the UCI's anti-doping  
10:43:28 20 regulations is USADA must present  
10:43:30 21 evidence of a doping violation to the  
10:43:32 22 comfortable satisfaction of a hearing  
10:43:34 23 body bearing in mind the seriousness of  
10:43:36 24 the allegation which is made.

10:43:45 25 As to the burden of proof,

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10:43:48 2 the USADA shall have the burden of  
10:43:50 3 establishing that an anti-doping rule  
10:43:53 4 violation has occurred, first.

10:43:55 5 Second, of course USADA  
10:43:56 6 enjoys the presumption that the  
10:43:57 7 laboratory's conclusions are accurate,  
10:43:59 8 assuming that they are accredited for  
10:44:01 9 the method, and we'll get into that in  
10:44:03 10 a minute.

10:44:04 11 Second, the rider may rebut  
10:44:06 12 this presumption by establishing that a  
10:44:07 13 departure from the international  
10:44:09 14 standard occurred; and third, USADA  
10:44:11 15 shall have the burden to establish that  
10:44:12 16 the departure did not cause the adverse  
10:44:14 17 analytical finding.

10:44:16 18 We submit that USADA will  
10:44:18 19 not be able to meet this burden. Let's  
10:44:21 20 turn first to the specific  
10:44:22 21 accreditation issues in this case.

10:44:24 22 Accreditation. As I just  
10:44:29 23 mentioned, the lack of accreditation  
10:44:32 24 equals the lack of a presumption in  
10:44:33 25 this case in the laboratory's favor. A

1 P R O C E E D I N G S

10:44:37 2 presumption of course runs according to  
10:44:38 3 the method used, and I'm citing from  
10:44:43 4 the Tyler Hamilton decision, however,  
10:44:47 5 the lack of specific accreditation  
10:44:48 6 shifts the burden to, and in this case  
10:44:51 7 it was IAAF, to show that the lab  
10:44:54 8 conducted its testing in accordance  
10:44:56 9 with the scientific community's  
10:44:57 10 practices and procedures and that it  
10:44:58 11 satisfied itself as to the validity of  
10:45:02 12 the method before using it. So the  
10:45:05 13 method must be accredited.

10:45:07 14 Let's start first and  
10:45:08 15 foremost with the T/E method. You  
10:45:12 16 might ask why we are addressing the T/E  
10:45:15 17 method first. It is --

10:45:22 18 THE PRESIDENT: Excuse me  
10:45:23 19 just one second.

10:45:27 20 (Discussion off the record.)

10:45:31 21 MR. PAULSSON: Do you mind  
10:45:32 22 interruptions?

10:45:34 23 MR. SUH: Not at all.

10:45:36 24 MR. PAULSSON: It's actually  
10:45:37 25 line 3 of Page 42 in the transcript.

1 P R O C E E D I N G S

10:45:39 2 As you began your opening statement you  
10:45:41 3 said, you referred to the fact that the  
10:45:44 4 result was a false positive. And I'm  
10:45:47 5 wondering as to how that statement  
10:45:49 6 colors your entire thesis in the sense  
10:45:52 7 that I was expecting and now I see how  
10:45:56 8 your argument is going, that you would  
10:45:58 9 rather say that the result was a  
10:46:01 10 positive which cannot be comfortably  
10:46:04 11 established rather than say there was a  
10:46:07 12 result of a false positive which is  
10:46:09 13 quite a different proposition.

10:46:10 14 MR. SUH: Yes. If I --  
10:46:13 15 well, let me start from scratch so I'm  
10:46:15 16 perfectly clear. The test results in  
10:46:18 17 this case have resulted in data and  
10:46:21 18 conclusions which are not accurate and  
10:46:24 19 they are not reliable. To the extent  
10:46:26 20 that USADA has, and the lab claimed  
10:46:29 21 that they constitute sufficient support  
10:46:31 22 for an adverse analytic finding, we  
10:46:34 23 believe that that -- the data that  
10:46:36 24 support that have been generated in  
10:46:38 25 error due to poor laboratory practices

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10:46:40 2 and issues that we'll talk about.

10:46:43 3 MR. PAULSSON: You don't  
10:46:44 4 intend to accept that what you need to  
10:46:46 5 prove is that there was a false  
10:46:47 6 positive?

10:46:49 7 MR. SUH: Excuse me. Could  
10:46:53 8 you repeat the question.

10:46:54 9 MR. PAULSSON: Do you intend  
10:46:55 10 to suggest that what you need to prove  
10:46:56 11 is that there was a false positive?

10:46:58 12 MR. SUH: No, no.

10:47:00 13 MR. PAULSSON: That was my  
10:47:01 14 question.

10:47:02 15 MR. SUH: If I meant to  
10:47:03 16 suggest that --

10:47:04 17 MR. PAULSSON: Your opening  
10:47:05 18 lines.

10:47:05 19 MR. SUH: The T/E method is  
10:47:09 20 not accredited. And these are straight  
10:47:12 21 out of their accreditation documents,  
10:47:15 22 LNDD used EC-24D, not EC-24C to conduct  
10:47:21 23 the T/E confirmation analysis and they  
10:47:23 24 were not accredited for their purpose.

10:47:26 25 Let's turn to the carbon

1 P R O C E E D I N G S

10:47:30 2 isotope ratio test. I'm going to talk  
10:47:32 3 about this in greater length as we go  
10:47:34 4 along, but just because this is the  
10:47:36 5 first time I've used the phrase carbon  
10:47:40 6 isotope ratio test. The panel  
10:47:41 7 understands, as I'm sure, that the  
10:47:43 8 carbon isotope ratio test consists of  
10:47:45 9 two tests, a GC/MS test, gas  
10:47:50 10 chromatography, mass spectrometry, and  
10:47:54 11 the GC/C/IRMS test, two different  
10:47:56 12 instruments, when run together they  
10:47:58 13 constitute the carbon isotope ratio  
10:48:00 14 test.

10:48:01 15 So with respect to the  
10:48:03 16 carbon isotope ratio test, LNDD's  
10:48:08 17 carbon isotope ratio test is EC-31.  
10:48:10 18 EC-31 includes as a method M-AN-52 as  
10:48:15 19 its GC/MS test. GC/MS of course is  
10:48:19 20 their vital step 2 in their three step  
10:48:22 21 method of the carbon isotope ratio test  
10:48:24 22 that you've read about in their briefs.  
10:48:26 23 And EC-31 as accredited does not  
10:48:28 24 include M-AN-52.

10:48:31 25 And if you turn to the next



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10:48:34 2 slide, Todd. Yes. There it is. It  
10:48:38 3 does not include M-AN-52, EC-31 as  
10:48:42 4 accredited.

10:48:43 5 And turning to the next  
10:48:47 6 slide, Todd. USADA has made the claim  
10:48:50 7 of course that it's -- so you know,  
10:48:52 8 it's not like we're making up the .8  
10:48:55 9 uncertainty. That it is something that  
10:48:58 10 they've determined in validation, that  
10:48:59 11 the ISO double-checked and signed off  
10:49:02 12 on. In fact the measure of uncertainty  
10:49:04 13 at the time this test was conducted was  
10:49:06 14 listed as 20 percent.

10:49:07 15 Based on these issues, and  
10:49:11 16 it's a relatively easy to understand  
10:49:15 17 set of issues, there's no presumption  
10:49:16 18 that the carbon isotope ratio test as  
10:49:18 19 performed at the time this test was  
10:49:20 20 conducted benefits that it -- benefits  
10:49:22 21 from the presumption that we discussed.

10:49:23 22 And again of course the T/E  
10:49:28 23 test was found to be in violation of  
10:49:31 24 the ISL.

10:49:32 25 So that in essence is how

1 P R O C E E D I N G S

10:49:36 2 this -- before we get to the issues  
10:49:40 3 themselves that we've talked about,  
10:49:41 4 what I'd like to do now is talk a  
10:49:43 5 little bit about the mechanics of a  
10:49:46 6 carbon isotope ratio test.

10:49:47 7 This part I was not sure how  
10:49:50 8 long to entertain. The panel may be,  
10:49:54 9 I'm sure it is far more sophisticated  
10:49:56 10 than I am with respect to the test, but  
10:49:58 11 some of these principles are going to  
10:50:00 12 be repeated in the following slides and  
10:50:03 13 if we all don't have a good mutual  
10:50:06 14 understanding then some of it might not  
10:50:08 15 make sense. If I'm saying things that  
10:50:10 16 the panel completely understands,  
10:50:12 17 please move me along.

10:50:13 18 All right, so the --

10:50:15 19 MR. RIVKIN: By the way, I  
10:50:16 20 assume we're going to get a copy of  
10:50:17 21 your slides?

10:50:18 22 MR. SUH: Yes. The carbon  
10:50:21 23 isotope ratio test equals the GC/MS  
10:50:24 24 plus the GC/C/IRMS test. And as we go  
10:50:29 25 through this, what I like to call the

## 1 P R O C E E D I N G S

10:50:32 2 little teaching section, which I'm sure  
10:50:34 3 all the experts will chastise me for  
10:50:37 4 later, I'm going to try to use this as  
10:50:39 5 much as possible the USADA explanation  
10:50:42 6 and LNDD explanation of the test  
10:50:44 7 because most of this is undisputed  
10:50:47 8 between the parties.

10:50:48 9 So let's begin. The first  
10:50:50 10 step: There are supposedly three steps  
10:50:52 11 of IRMS. There's the sample prep step,  
10:50:55 12 there is the GC/MS step, and there is  
10:50:59 13 the GC/C/IRMS step. For ease during  
10:51:04 14 this opening I'm going to refer to  
10:51:06 15 GC/C/IRMS although it's gas  
10:51:08 16 chromatography combustion isotope ratio  
10:51:13 17 mass spectrometry, I'm going to refer  
10:51:13 18 to that as IRMS. So step 2, GC/MS,  
10:51:17 19 step 3 IRMS. The preparation step is  
10:51:20 20 the process of converting urine into a  
10:51:22 21 form capable of being analyzed. That  
10:51:24 22 is a simplification. It is a process  
10:51:26 23 that takes over a day and has many  
10:51:29 24 steps within it. But it has among  
10:51:31 25 other purposes three primary purposes.

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10:51:34 2 One of the purposes, perhaps the  
10:51:36 3 primary purpose is to clean up the  
10:51:37 4 sample. Urine, as you heard, is a  
10:51:40 5 dirty matrix, it contains a lot of  
10:51:42 6 contaminants within it. The more you  
10:51:44 7 can clean the sample, the more, for  
10:51:46 8 example, you can get it to an acetone  
10:51:48 9 or hexane mix, the cleaner, the easier  
10:51:51 10 it is to obtain good chromatography.  
10:51:54 11 So you want to remove the contaminants  
10:51:57 12 from the sample.

10:51:58 13 Number 2 is the process is to  
10:52:01 14 divide the target isotopes into  
10:52:03 15 fractions. Again, this is so you could  
10:52:05 16 get good chromatography, you're dividing  
10:52:07 17 it into fractions F1, F2 and F3. It  
10:52:11 18 divides up your six target analytes,  
10:52:14 19 metabolites into three samples so you can  
10:52:16 20 run them and all the peaks won't be  
10:52:18 21 sitting too close to each other. Those  
10:52:20 22 are the six target metabolites are 5-beta  
10:52:20 23 androstanediol which we're going shorten  
10:52:26 24 to Adiol, 5-alpha androstanediol, and  
10:52:30 25 pregnanediol which we'll call Pdiol. So

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10:52:30 2 5-beta androstenediol, 5-alpha  
10:52:33 3 androstenediol and PdIol.

10:52:35 4 And the F1 fraction there is  
10:52:37 5 only one metabolite, that's 11  
10:52:40 6 ketoetio. And in the F2 fraction there  
10:52:43 7 are two. These are the etiocholanolone  
10:52:49 8 and the androsterone which we'll be  
10:52:52 9 calling etio and andro.

10:52:54 10 Of course as the panel is  
10:52:55 11 aware, only four of these are the  
10:52:57 12 breakdown metabolites of testosterone,  
10:53:00 13 that's the 5-beta, 5-alpha which are a  
10:53:03 14 pair, the etio and andro which are a  
10:53:05 15 pair. The PdIol and 11 ketoetio and  
10:53:08 16 are your endogenous reference  
10:53:10 17 compounds. That's how you obtain the  
10:53:11 18 delta/delta values, by subtracting one  
10:53:13 19 from the other. They're divided into  
10:53:15 20 those fractions.

10:53:16 21 The last step is  
10:53:18 22 derivatization, which is a way to make  
10:53:20 23 the sample easier to vaporize it. So  
10:53:22 24 you can actually conduct the test  
10:53:24 25 within the GC/MS phase of both the

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10:53:27 2 GC/MS and IRMS test. Gross  
10:53:30 3 over-simplification, but it's important  
10:53:32 4 to understand I think that preparation  
10:53:35 5 is for the purpose of obtaining clean  
10:53:37 6 chromatograms as you go through this  
10:53:39 7 process.

10:53:39 8 Okay. Next, the GC/MS  
10:53:44 9 phase. The gas chromatograph/mass  
10:53:47 10 spectrometer, GC/MS. It's an  
10:53:50 11 instrument and showing here you have  
10:53:51 12 your sample injected where the sample  
10:53:54 13 injector is marked. It goes into your  
10:53:56 14 column, and the sample runs through the  
10:54:00 15 column and the molecules exit the  
10:54:04 16 column or elute from the column at  
10:54:06 17 differing rates. They exit the column  
10:54:09 18 or elute from the column in differing  
10:54:11 19 rates based upon their chemical  
10:54:13 20 interaction with the lining of the  
10:54:14 21 column.

10:54:15 22 So they come out at  
10:54:17 23 different times. And that's why we see  
10:54:19 24 different retention times, the thing  
10:54:21 25 we're going to spend so much time

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10:54:22 2 talking about over the next few days.

10:54:24 3 So these molecules are going to come

10:54:26 4 out. When they come out at different

10:54:28 5 times, they hit the mass spectrometer

10:54:31 6 detector and they then create for us

10:54:33 7 the picture. And that picture is a

10:54:36 8 chromatogram, the GC/MS chromatogram.

10:54:41 9 And as I'm sure the panel is

10:54:42 10 aware for all these chromatograms you

10:54:44 11 can identify which chromatogram it is

10:54:47 12 by of course this information up here.

10:54:48 13 This is 995474 which is Stage 17, the

10:54:53 14 F3 fraction of that stage. And let's

10:54:57 15 see, this is the sample. So what it

10:55:00 16 does is it creates a picture of the

10:55:04 17 response on the detector.

10:55:07 18 And the picture on the X

10:55:09 19 axis is retention time, this is the

10:55:11 20 time it elutes from the column and on

10:55:13 21 the Y axis is ion response. And based

10:55:16 22 upon -- based upon a series of

10:55:19 23 calculations we'll talk about and other

10:55:21 24 potential calculation we'll talk about,

10:55:23 25 there are ways to identify the

1 P R O C E E D I N G S

10:55:25 2 substances as they elute from the  
10:55:28 3 GC/MS. The GC/MS phase allows you to  
10:55:31 4 identify columns. I know there's a  
10:55:33 5 debate, I'm not going to get into it  
10:55:34 6 now, but there's a debate about whether  
10:55:37 7 or not this was used for identification  
10:55:38 8 purposes. Leaving that aside, it is --  
10:55:40 9 I don't believe the parties dispute  
10:55:42 10 that GC/MS allows you to identify the  
10:55:45 11 compounds.

10:55:45 12 Okay. The next phase is the  
10:55:54 13 IRMS phase. This is a graphic of the  
10:55:57 14 instrument. Once again -- you have an  
10:56:06 15 injection at this point right here, the  
10:56:10 16 substance in the same fractions, F3,  
10:56:14 17 F2, F1, excuse me, F3, F1, F2, start  
10:56:17 18 traveling through this -- the  
10:56:20 19 instrument through here and they go  
10:56:22 20 through the column. This column is and  
10:56:25 21 should be the same column that's used  
10:56:27 22 in the GC/MS. In other words, at this  
10:56:30 23 part of the instrument, the molecules  
10:56:32 24 as they are running through the column  
10:56:34 25 are going to behave the same way as



1 P R O C E E D I N G S

10:56:36 2 they do in the GC/MS phase, that's why  
10:56:40 3 it's the gas chromatograph. And as  
10:56:45 4 they elute they should elute in  
10:56:47 5 basically the same order.

10:56:49 6 MR. PAULSSON: That depends  
10:56:50 7 on which configuration has been chosen  
10:56:52 8 by the lab.

10:56:53 9 MR. SUH: Correct. The  
10:56:54 10 configuration I believe you're talking  
10:56:55 11 about refers to the method file which  
10:56:57 12 deals with the heat in particular and  
10:56:59 13 other factors that would impact the  
10:57:01 14 rate at which these come out. But  
10:57:03 15 that's correct. This is --

10:57:04 16 MR. PAULSSON: Combined or  
10:57:05 17 separate?

10:57:06 18 MR. SUH: Combined or  
10:57:08 19 separate. So the column is important  
10:57:10 20 as well as the method file, that's  
10:57:12 21 absolutely correct.

10:57:12 22 You may have heard or you  
10:57:15 23 may have noticed from Dr. Brenna's  
10:57:17 24 testimony that there's a plumbing  
10:57:19 25 issue. The plumbing in this instrument

## 1 P R O C E E D I N G S

10:57:21 2 is the place from where the molecules  
10:57:24 3 elute from the column and run along  
10:57:27 4 this way to here.

10:57:28 5 Now the thing to remember  
10:57:29 6 about the plumbing is of course when  
10:57:31 7 the molecules run along the plumbing  
10:57:33 8 they are running along at the same rate  
10:57:36 9 regardless of their identity, they're  
10:57:40 10 going to move at the same rate through  
10:57:42 11 this piece of plumbing right here,  
10:57:44 12 unlike their movement through here in  
10:57:45 13 which their rate will vary depending  
10:57:48 14 upon how they interact with the liner  
10:57:50 15 of that column.

10:57:50 16 So just something to keep in  
10:57:53 17 mind as an issue that will arise.

10:57:56 18 By the way, this has a  
10:57:59 19 little thing up here, a flame ion  
10:58:02 20 detector, the flame ion detector is not  
10:58:05 21 used at LNDD as far as we know. I'm  
10:58:09 22 going to leave a discussion of that  
10:58:11 23 off.

10:58:11 24 I brought for you an actual  
10:58:14 25 column so you can see what it's like.

## 1 P R O C E E D I N G S

10:58:15 2 There's been so much debate over it.  
10:58:18 3 It's something you can look at. Gee, I  
10:58:21 4 don't know how it is, but this is the  
10:58:22 5 column. It shows you how narrow it is.  
10:58:27 6 This is what it looks like. And of  
10:58:31 7 course when it leaves the GC phase it's  
10:58:33 8 going to go to the next phase which is  
10:58:34 9 the combustion phase.

10:58:36 10 The combustion phase has two  
10:58:39 11 components to it. There's a heat phase  
10:58:41 12 where the molecules are combusted. And  
10:58:46 13 these molecules when they combust just  
10:58:48 14 like all organic compounds turn into  
10:58:51 15 two substances, carbon dioxide and  
10:58:53 16 water. The cold trap here is for the  
10:58:56 17 purpose of removing the water so that  
10:58:58 18 all you have is carbon dioxide flowing  
10:59:01 19 here. As you go down to the mass  
10:59:09 20 spectrometer these molecules get  
10:59:11 21 ionized. They pass through a magnet  
10:59:14 22 which separates them out according to  
10:59:16 23 mass 44, 45 and 46. The mass 44, 45  
10:59:20 24 and 46 will generate a response which  
10:59:23 25 is directly related to the chromatogram

## 1 P R O C E E D I N G S

10:59:26 2 and also, as you will hear, directly  
10:59:29 3 related to the two over one trace that  
10:59:31 4 you've heard so much about. These are  
10:59:32 5 the three, these little three  
10:59:34 6 rectangles represent 44, 45 and 46.

10:59:37 7 So the thing to remember  
10:59:40 8 about the IRMS test here: Zero  
10:59:43 9 identification capability. This  
10:59:46 10 instrument standing alone cannot  
10:59:49 11 identify your substances. So there has  
10:59:52 12 to be some other way or some other  
10:59:53 13 process used to identify substances  
10:59:57 14 when you use the IRMS instrument.

10:59:59 15 These ions when they leave  
11:00:03 16 the mass spectrometer they hit a  
11:00:07 17 detector and after they hit the  
11:00:09 18 detector, they then create a picture.  
11:00:12 19 And the picture they create is a  
11:00:14 20 chromatogram. This is one example of a  
11:00:17 21 chromatogram and again, the X axis is  
11:00:21 22 the retention time just like the GC/MS  
11:00:25 23 phase, the Y axis is ion response.

11:00:29 24 There is something to keep  
11:00:31 25 in mind about this. First thing is

1 P R O C E E D I N G S

11:00:34 2 this. That you'll see the isotopic  
11:00:37 3 values which are supposedly, allegedly  
11:00:39 4 calculated on this chromatogram don't  
11:00:43 5 correspond to peak height. That is  
11:00:45 6 because the isotopic value measures the  
11:00:49 7 ratio of the 45 to, mass 44 to mass 45  
11:00:54 8 ions which basically roughly  
11:00:55 9 corresponds to the carbon 13 and carbon  
11:00:58 10 12 in the case. Of course as you know,  
11:01:01 11 the ratio of carbon 13 to carbon 12  
11:01:04 12 helps you identify whether or not the  
11:01:06 13 substance, in this instance  
11:01:09 14 testosterone, has an exogenous or an  
11:01:10 15 endogenous body source.

11:01:12 16 So that's the picture,  
11:01:13 17 that's what you get.

11:01:13 18 And let's go on to the  
11:01:15 19 automated run sequence. This is what  
11:01:17 20 LNDD does in the IRMS phase. So what  
11:01:20 21 they do is they have three stability  
11:01:22 22 runs. These are all run through the  
11:01:24 23 IRMS. The three stability runs which  
11:01:28 24 are essentially pulses of carbon  
11:01:31 25 dioxide gas. Three Mix Cal IRMS runs

## 1 P R O C E E D I N G S

11:01:34 2 which are 4 alkanes, not in solution.  
11:01:36 3 We have then the Mix Cal Acetate in  
11:01:39 4 which in a hexane solution you have  
11:01:42 5 four standards that are run. The first  
11:01:44 6 one, 5-alpha androstanol AC. I admit  
11:01:49 7 that in the transcript below we were  
11:01:52 8 sloppy, all of us were sloppy and we  
11:01:54 9 started calling 5-alpha androstanol AC  
11:01:59 10 5-alpha. We also called 5-alpha  
11:02:02 11 androstanediol 5-alpha. That's a  
11:02:06 12 confusing mistake. The 5-alpha  
11:02:08 13 androstanol AC, 5-alpha AC is not found  
11:02:14 14 in the human body. It is a certified  
11:02:18 15 standard that you purchase, and as LNDD  
11:02:21 16 does, inject into your samples. In  
11:02:23 17 fact as you know they inject them into  
11:02:25 18 all these samples. And just like the  
11:02:27 19 other three, which is 5-beta  
11:02:31 20 androstanediol AC which is equivalent  
11:02:34 21 to the 5-beta androstanediol which is  
11:02:39 22 where the testosterone metabolites,  
11:02:43 23 etiocholanolone AC which is just like  
11:02:47 24 etio, and 11 ketoetio diacetate. These  
11:02:52 25 are your four standards that are coming

1 P R O C E E D I N G S

11:02:55 2 through.

11:02:56 3 We'll go through it later.

11:02:57 4 In essence it's important to know that

11:03:00 5 those are certified standards and they

11:03:02 6 have an expected isotopic value and the

11:03:06 7 measurement of those are plus or minus

11:03:08 8 .5. And we'll get into this point in

11:03:11 9 the very near future.

11:03:12 10 So this Mix Cal Acetate is

11:03:14 11 run before and it's run after and then

11:03:16 12 there are the three samples, blank

11:03:19 13 urine, F3, F2, F1, F3, F2, F1. These

11:03:26 14 are out of order. They should be F3,

11:03:29 15 in order of sequence, it should be F3,

11:03:31 16 F1, F2. We will fix that before we

11:03:35 17 submit it.

11:03:35 18 But this is the order. It

11:03:37 19 is done automatically unless it is

11:03:39 20 halted, and that is the issue that you

11:03:42 21 have read below with respect to the log

11:03:45 22 files with all these explanations about

11:03:47 23 why this thing gets halted. It's

11:03:49 24 helpful to understand that this is the

11:03:51 25 process.

1 P R O C E E D I N G S

11:04:10 2 Let's talk about quality  
11:04:11 3 control. This is our first issue.  
11:04:18 4 First of all, we refer to the ISL. The  
11:04:22 5 range of quality control activities  
11:04:24 6 includes positive and negative  
11:04:25 7 controls, and as you see here, the use  
11:04:28 8 of deuterated or other internal  
11:04:30 9 standards.

11:04:30 10 This discussion is going to  
11:04:33 11 focus on 5-alpha androstanol AC which  
11:04:38 12 I'm going to now start to refer to as  
11:04:40 13 5-alpha -- well, actually, you know  
11:04:42 14 what, I'm going to just say the whole  
11:04:43 15 things. It's so important that we keep  
11:04:46 16 this separate from 5-androstanediol  
11:04:48 17 which is found in the human body.

11:04:50 18 Okay, 5-alpha androstanol AC. What I'm  
11:04:55 19 going to show you is a progression of a  
11:04:58 20 story about what 5-alpha androstanol AC  
11:05:02 21 is used for in the laboratory. Because  
11:05:05 22 it's very hard to puzzle through this  
11:05:07 23 from the beginning. I think nearly  
11:05:09 24 impossible.

11:05:09 25 And in this presentation



1 P R O C E E D I N G S

11:05:13 2 you're going to hear and we have named  
11:05:15 3 -- there are these three big stories  
11:05:17 4 we're going to tell you about related  
11:05:19 5 to the calculation of identification,  
11:05:21 6 quality control and chain of custody.  
11:05:23 7 Because there are so many shifting  
11:05:25 8 stories, the first one's going to go 1,  
11:05:28 9 2, 3, the second one's going to be A,  
11:05:31 10 B, C and the third one is going to be  
11:05:33 11 X, Y, Z.

11:05:33 12 So story 1, which is LNDD,  
11:05:36 13 does use the internal standard as a  
11:05:38 14 quality control. The internal standard  
11:05:40 15 verifies instrument performance.

11:05:41 16 Okay. Now, by the way, you  
11:05:44 17 have seen in their briefs -- the reason  
11:05:46 18 why we felt it so important to raise  
11:05:48 19 this issue to you is you've seen in  
11:05:50 20 their briefs over and over, they say --  
11:05:53 21 they say that we are trying to impose  
11:05:55 22 some rule or some expectation on them.  
11:05:59 23 None of this is true. This was all  
11:06:01 24 responsive to things that we were told.  
11:06:02 25 And the first thing we were told that

1 P R O C E E D I N G S

11:06:05 2 supported this was Dr. Brenna, who  
11:06:08 3 testified under oath, he was USADA's  
11:06:11 4 second witness, it's in the transcript,  
11:06:13 5 he testified a standard that has been  
11:06:17 6 added to every sample that elutes early  
11:06:20 7 and that standard is further checked to  
11:06:22 8 determine that the instrument is  
11:06:23 9 running properly during analysis of  
11:06:24 10 every particular sample.

11:06:26 11 Now what he is talking about  
11:06:27 12 here when you get to the transcript, is  
11:06:31 13 that this 5-alpha androstanol AC is  
11:06:35 14 injected into the sample. You probably  
11:06:36 15 read that they forced the sample at 870  
11:06:39 16 seconds. So they put it in there. And  
11:06:41 17 that it should fall within plus or  
11:06:43 18 minus .5 of the expected isotopic  
11:06:46 19 value. That's how you know the  
11:06:48 20 instrument is being accurate. Okay.  
11:06:51 21 Ah, one more thing. Accuracy and  
11:06:53 22 precision. Precision, as we're going  
11:06:56 23 to use here, is the ability for an  
11:06:59 24 instrument to hit the same mark. Mark  
11:07:03 25 I'm using colloquially. Accuracy is

1 P R O C E E D I N G S

11:07:06 2 the ability of an instrument to hit an  
11:07:08 3 accurate mark.

11:07:10 4 My favorite analogy is this.

11:07:12 5 Precision: It allows you if you are  
11:07:14 6 shooting a rifle to shoot small groups.  
11:07:16 7 That doesn't mean you can get the  
11:07:18 8 bull's eye in a small group. It just  
11:07:20 9 means that your rifle is going to shoot  
11:07:23 10 groups that are small. Accuracy means  
11:07:26 11 you can hit your bull's eye. So  
11:07:29 12 ideally your instrument is both  
11:07:32 13 precise, repeatable, and accurate. You  
11:07:34 14 can hit it where you want.

11:07:35 15 This standard, the 5-alpha  
11:07:38 16 androstanol AC hits the target -- is  
11:07:42 17 something which is designed, per Dr.  
11:07:45 18 Brenna's testimony, that will allow you  
11:07:47 19 to determine that it is hitting your  
11:07:50 20 predicted isotopic value plus or minus  
11:07:56 21 .5. So that was his testimony.

11:07:58 22 Now what he didn't realize  
11:07:59 23 when he testified was that in fact many  
11:08:01 24 of the values of the 5-alpha  
11:08:03 25 androstanol AC fell outside of the plus

1 P R O C E E D I N G S

11:08:06 2 or minus .5 which would of course have  
11:08:08 3 suggested that the instrument was not  
11:08:09 4 accurate and if it was not accurate  
11:08:11 5 then you couldn't trust the values. So  
11:08:13 6 here we go.

11:08:15 7 Next slide. He was cross  
11:08:17 8 examined and he got caught. So before  
11:08:22 9 we go on, let me show you these slides,  
11:08:25 10 just further flesh this out. This is  
11:08:28 11 so important for the progression of  
11:08:29 12 this story. I'm not even going to try  
11:08:34 13 this because later on you'll see how  
11:08:37 14 inaccurate this really is. One of  
11:08:39 15 these peaks in the beginning is your  
11:08:43 16 5-alpha androstanol. They say it comes  
11:08:47 17 out at about 870 seconds. We're going  
11:08:49 18 to call this. It actually is this one  
11:08:52 19 given the value. This one is outside  
11:08:54 20 of the measured expectation that -- out  
11:08:56 21 of the expected isotopic value plus or  
11:08:59 22 minus .5. We have a chart, SI is your  
11:09:06 23 internal standard minus 31.64, here is  
11:09:12 24 your measure. This is going to be  
11:09:14 25 easier to see on the summary chart

1 P R O C E E D I N G S

11:09:16 2 prepared by Dr. Meier-Augenstein which  
11:09:19 3 we're going to get to right now, but  
11:09:21 4 basically these charts so a sample.  
11:09:24 5 Here is your expected delta/delta  
11:09:26 6 value, here on the bottom. Here's your  
11:09:28 7 samples, Mix Cal Acetate, you remember  
11:09:32 8 this, blank F3, F3, blank F1, F1, blank  
11:09:36 9 F2, F2, Mix Cal Acetate. This is a  
11:09:39 10 graph of where they are hitting.  
11:09:41 11 Here's the expected value, here's your  
11:09:43 12 plus or minus .5, here are your values  
11:09:46 13 that are popping outside. It showed  
11:09:47 14 the instrument on the A sample was not  
11:09:50 15 accurate in these samples. Okay.

11:09:53 16 MR. PAULSSON: Every time  
11:09:53 17 you use the expression isotopic value  
11:09:56 18 is that the delta/delta?

11:09:59 19 MR. SUH: The delta is  
11:10:02 20 actually the subtraction of your  
11:10:03 21 isotopic value of your target  
11:10:06 22 testosterone metabolite from your  
11:10:09 23 endogenous reference compound. The  
11:10:14 24 other way around. The subtraction from  
11:10:17 25 the endogenous reference compound of

## 1 P R O C E E D I N G S

11:10:19 2 your target metabolite. It stabilizes  
11:10:22 3 things like diet within the body  
11:10:24 4 because your endogenous reference  
11:10:27 5 compound doesn't react to the  
11:10:29 6 administration of endogenous reference  
11:10:47 7 compound does not react to the  
11:10:48 8 administration of endogenous  
11:10:50 9 testosterone, it does not react to the  
11:10:54 10 same carbon 13. Carbon 12 differences  
11:10:57 11 you will see when you look at your  
11:11:00 12 testosterone metabolites. 5-alpha,  
11:11:04 13 5-beta, andro etio.

11:11:08 14 Let's go to the next chart,  
11:11:11 15 Todd. Here's the B. All right. Same  
11:11:20 16 thing on the bottom scale, Mix Cal  
11:11:23 17 Acetate, blank F3, F3, blank F1, F1,  
11:11:27 18 F2, Mix Cal Acetate. Here are your  
11:11:31 19 values that fell out --

11:11:35 20 THE PRESIDENT: Mr. Suh, may  
11:11:36 21 I interrupt. Would it be possible when  
11:11:37 22 you come to a new slide to give the  
11:11:39 23 number from the bottom right as you  
11:11:41 24 speak and then in the record we'll be  
11:11:43 25 able to connect the transcript to the

1 P R O C E E D I N G S

11:11:45 2 slide?

11:11:46 3 MR. SUH: Slide 33.

11:11:48 4 THE PRESIDENT: Thank you.

11:11:49 5 MR. SUH: We will substitute

11:11:51 6 the one slide where the F2 and the F1

11:11:53 7 are transposed in sequence.

11:11:55 8 Slide 33. So this was the

11:11:58 9 cross examination, this was our cross

11:12:00 10 examination in the AAA hearing, Dr.

11:12:03 11 Brenna, you didn't know, etc., it fell

11:12:05 12 out of standard. Okay.

11:12:06 13 Next slide. Okay. So it

11:12:15 14 doesn't work, it doesn't make their

11:12:17 15 instrument look so accurate. So the

11:12:19 16 next story we hear is LNDD does not use

11:12:23 17 the internal standard as a quality

11:12:25 18 control and therefore your isotopic

11:12:28 19 value need not fall within the required

11:12:30 20 range. This is their answer now. And

11:12:32 21 specifically what they say is well,

11:12:37 22 your internal standard 5-alpha

11:12:44 23 androstanol AC is interchangeable,

11:12:47 24 that's the 5-alpha androstanol internal

11:12:50 25 standard --

1 P R O C E E D I N G S

11:12:52 2 THE PRESIDENT: I think Ms.  
11:12:53 3 Schorr is having some trouble because  
11:12:54 4 these are complicated words and you're  
11:12:56 5 going quite quickly. So let's repeat  
11:12:58 6 that so that she can have a better  
11:12:58 7 chance.

11:12:59 8 MR. SUH: 5-androstanol AC  
11:13:02 9 I'm going to use interchangeably with  
11:13:04 10 internal standard.

11:13:05 11 MR. RIVKIN: Just to make it  
11:13:07 12 easier for you and for Gail, is it --  
11:13:11 13 would it be fair to refer to the two  
11:13:13 14 compounds as 5-alpha a C and 5-alpha  
11:13:16 15 diol?

11:13:17 16 MR. SUH: Great, perfect.  
11:13:19 17 5-alpha AC, and the 5-alpha diol which  
11:13:25 18 we're really not talking about yet.

11:13:27 19 So isotopic value need not  
11:13:29 20 fall within the required range. Now,  
11:13:36 21 as you may have seen in the testimony,  
11:13:38 22 some of the declarations, the reason  
11:13:40 23 why it can't is because there's matrix  
11:13:43 24 interference around the internal  
11:13:46 25 standard which they admit matrix



## 1 P R O C E E D I N G S

11:13:48 2 interference interferes with obtaining  
11:13:51 3 accurate isotopic value, okay. Just a  
11:14:00 4 rough -- so basically you have a  
11:14:08 5 pattern of co-eluting peaks -- we'll  
11:14:11 6 get to the subject in a minute -- which  
11:14:11 7 will interfere with your ability to  
11:14:13 8 determine isotopic value accurately.  
11:14:15 9 So they say look, don't worry, we have  
11:14:17 10 matrix interference, we're not using it  
11:14:20 11 for that purpose, it looks like this.  
11:14:23 12 Here's your IRMS chromatogram, and  
11:14:28 13 you've got your reference gas pulses,  
11:14:35 14 you've got your thing that goes out  
11:14:36 15 here and then you've got some matrix  
11:14:38 16 interference, you've got your internal  
11:14:40 17 standard. It's very rough, not  
11:14:43 18 representing that this is any  
11:14:45 19 particular chromatogram. But you've  
11:14:47 20 got matrix interference, therefore we  
11:14:50 21 can't get this accurately.

11:14:52 22 So now, there are -- the  
11:14:56 23 next chart I want to show you is all of  
11:15:00 24 the USADA witnesses who have testified  
11:15:02 25 or declared under oath that -- these

1 P R O C E E D I N G S

11:15:07 2 testified under oath after Brenna's  
11:15:10 3 cross, that you don't use the internal  
11:15:11 4 standard for the purpose of determining  
11:15:15 5 isotopic value, you use it for another  
11:15:18 6 purpose which we'll get to. You use it  
11:15:19 7 for relative retention.

11:15:21 8 These testified at the AAA.  
11:15:25 9 Here are the list of CAS witnesses. By  
11:15:28 10 the way, and this is going to be an  
11:15:30 11 important point, these three of course,  
11:15:32 12 Ayotte, Matthews and Dr. Brenna, these  
11:15:34 13 people don't work at LNDD. They must  
11:15:36 14 have learned the -- this statement from  
11:15:41 15 somewhere. I don't know where yet.  
11:15:43 16 These do obviously, these work at LNDD.  
11:15:46 17 But the story is all the same. And  
11:15:48 18 this is important enough that I'm going  
11:15:49 19 to go through the declarations. Let's  
11:15:52 20 go. So that internal standard is not  
11:15:57 21 involved in the calculations to get the  
11:15:59 22 delta values or the delta/delta.  
11:16:03 23 Again, in essence saying it's not  
11:16:04 24 important it's out of standard.

11:16:07 25 Schaenzer, and they don't

1 P R O C E E D I N G S

11:16:09 2 pay attention to the -- here it is.

11:16:11 3 I'm sorry, the androstanol as a measure

11:16:14 4 of retention time and they don't pay

11:16:15 5 attention to quantification, yes,

11:16:17 6 that's correct.

11:16:17 7 Mongongu, and that's an LNDD

11:16:22 8 lab tech and that value is not

11:16:24 9 exploitable for the simple fact that it

11:16:26 10 is situated at the start chromatogram

11:16:30 11 where there is a matrixital

11:16:34 12 interference. That's the principle we

11:16:35 13 just talked about.

11:16:36 14 Christiane Ayotte says, this

11:16:38 15 is her declaration "Having consulted

11:16:39 16 their procedure, it is clear that the

11:16:40 17 androstanol," this is 5-alpha AC, "is

11:16:43 18 utilized to calculate relative the

11:16:45 19 retention times of different peaks.

11:16:47 20 There are interferences, and true delta

11:16:49 21 values are more difficult to obtain.

11:16:52 22 That is not a concern, since its

11:16:53 23 purpose is to be an anchor for

11:16:55 24 retention times."

11:16:56 25 And Matthews, same way, this

1 P R O C E E D I N G S

11:16:59 2 statement is not true, because he's --  
11:17:03 3 they're all addressing this issue. All  
11:17:08 4 addressing the same issue.

11:17:12 5 Dr. Brenna goes back to try  
11:17:13 6 and clarify his statement, in cross  
11:17:16 7 examination after direct testimony at  
11:17:18 8 that time I did not understand that the  
11:17:20 9 5-alpha androstanol was added for the  
11:17:23 10 restricted use as a retention time  
11:17:25 11 marker, I didn't understand that, and  
11:17:26 12 my earlier statement that it was used  
11:17:28 13 as a quality control measure was wrong.

11:17:29 14 Same thing, Ms. Buisson says  
11:17:35 15 the same thing, does not evaluate the  
11:17:37 16 delta value. By the way, they don't  
11:17:39 17 evaluate the delta value, it's in the  
11:17:42 18 doc pack over and over and over again,  
11:17:44 19 that's how we know about it. If they  
11:17:46 20 don't evaluate it why do they write it  
11:17:48 21 down. You'll see it.

11:17:49 22 Ms. Frelat, same thing, ISO  
11:17:55 23 pick value of the internal standard is  
11:17:58 24 not subject to quality control. Next  
11:18:00 25 one, Ms. Mongongu, same thing, at first

1 P R O C E E D I N G S

11:18:03 2 the story is it's a quality control,  
11:18:07 3 the problem with story number 2 is that  
11:18:10 4 all of these witnesses have forgotten  
11:18:12 5 and USADA has forgotten that early long  
11:18:17 6 time ago there was a discovery dispute  
11:18:19 7 and we submitted a discovery request  
11:18:21 8 which we're going to show you that  
11:18:22 9 talks about what 5-alpha does. And I'm  
11:18:31 10 going to hand out a hard copy of this  
11:18:33 11 in a minute.

11:18:35 12 We asked for this, let's go  
11:18:36 13 back, Todd. All documents that relate  
11:18:38 14 to LNDD's purchase and use of IRMS  
11:18:41 15 equipment and software. The response  
11:18:43 16 back to this, use of IRMS equipment and  
11:18:45 17 software, was that we had issued far  
11:18:48 18 too broad a statement of discovery  
11:18:50 19 request, we should narrow it. It  
11:18:52 20 eventually was narrowed. And as you go  
11:18:54 21 down, one of the rationales was that we  
11:19:06 22 have conducted a lot of accuracy  
11:19:10 23 testing and we do.

11:19:13 24 And here is their response,  
11:19:15 25 sample -- this is from the laboratory,

1 P R O C E E D I N G S

11:19:16 2 "sample 995474 was verified by the use  
11:19:19 3 of a known internal standard each time  
11:19:21 4 sample 995474 was analyzed, and known  
11:19:24 5 and positive and negative controls each  
11:19:26 6 time it was analyzed."

11:19:32 7 One can determine that the  
11:19:33 8 assay and instrument were performing  
11:19:35 9 properly when the instrument provides  
11:19:37 10 data on the internal standards and  
11:19:38 11 positive and negative controls within  
11:19:40 12 the range that is acceptable, within  
11:19:42 13 the range that is acceptable, for  
11:19:46 14 example for signal strength or measured  
11:19:48 15 value.

11:19:48 16 Then they provide us with  
11:19:50 17 this when we asked for, as you'll see  
11:19:53 18 in fact -- why don't you give me the  
11:19:55 19 discovery responses where the places  
11:19:57 20 are highlighted. They're going to tell  
11:19:59 21 us they point us to the chromatograms,  
11:20:02 22 internal standard 5-alpha androstanol  
11:20:04 23 AC. I'd like to hand to the panel  
11:20:11 24 their response in hard copy.

11:20:16 25 MR. RIVKIN: Will you hand

1 P R O C E E D I N G S

11:20:17 2 one to Mr. Young too, please.

11:20:20 3 MR. SUH: Now, when we go  
11:20:22 4 through, this is the first big issue  
11:20:23 5 that has arisen like this and there are  
11:20:25 6 others and there are others that are  
11:20:26 7 going to come out after this opening  
11:20:28 8 statement during the course of this  
11:20:29 9 trial. But they simply forgot and the  
11:20:34 10 thing that the panel, if I were on the  
11:20:36 11 panel I would ask myself is why all of  
11:20:39 12 their witnesses know that there was  
11:20:41 13 something different for the use than  
11:20:42 14 was actually stated in the discovery  
11:20:44 15 response. This was served on us on  
11:20:47 16 February 7th of last year.

11:20:48 17 Peak identification. Peak  
11:21:05 18 identification.

11:21:07 19 THE PRESIDENT: Are there  
11:21:08 20 any particular passages in here that  
11:21:10 21 you --

11:21:12 22 MR. SUH: They're  
11:21:13 23 highlighted.

11:21:15 24 THE PRESIDENT: Thank you.

11:21:16 25 MR. PAULSSON: Who put the

1 P R O C E E D I N G S

11:21:18 2 caption on this LNDD's response?

11:21:21 3 MR. SUH: They did. They

11:21:22 4 did. Peak identification. I mean

11:21:27 5 there are so many issues like this that

11:21:31 6 we need to draw the panel's attention

11:21:32 7 to and that's why I say the history of

11:21:34 8 this is so important, but we --

11:21:36 9 MR. RIVKIN: Before you go

11:21:37 10 on to that, since you've handed us this

11:21:39 11 document, it would be helpful if you

11:21:41 12 handed us also the document request to

11:21:44 13 the exhibit so we know what it's

11:21:46 14 responding to.

11:21:47 15 MR. SUH: We'll get you the

11:21:48 16 full package. It's likely -- that's

11:21:50 17 actually an attachment. We served it

11:21:52 18 on USADA, USADA served it back to us

11:21:55 19 with Exhibit A and B, it's about a

11:21:57 20 30-page document. At a break we'll

11:21:59 21 copy it for you.

11:22:00 22 THE PRESIDENT: If it's in

11:22:01 23 the record you can just tell us where

11:22:03 24 it is in the record.

11:22:04 25 MR. SUH: It's -- I don't



1 P R O C E E D I N G S

11:22:08 2 know where it is in the documents.

11:22:09 3 MR. RIVKIN: Either give us  
11:22:11 4 the record cite or give us the document  
11:22:13 5 that this is responding to.

11:22:14 6 MR. SUH: All right. Let's  
11:22:16 7 go on to peak identification. Before  
11:22:19 8 we go on to that, I do want to  
11:22:21 9 emphasize this. These are serious  
11:22:24 10 matters. I mean we're going to get to  
11:22:27 11 the integrity and credibility of this  
11:22:29 12 system. But these are incredibly  
11:22:31 13 serious matters. When we look at the  
11:22:33 14 testimony that has come in which is all  
11:22:37 15 lined up, one after another, after a  
11:22:39 16 story has changed. And we're going to  
11:22:43 17 see the same thing in peak  
11:22:44 18 identification.

11:22:46 19 MR. PAULSSON: Everybody  
11:22:46 20 will agree to that. If you can't  
11:22:48 21 identify the peak.

11:22:51 22 MR. SUH: Well, I hope so.  
11:22:52 23 I hope so. Peak identification, let me  
11:23:01 24 start with an ISL provision, the  
11:23:04 25 laboratory must establish that the

1 P R O C E E D I N G S

11:23:05 2 criteria for identification of a  
11:23:08 3 compound at least as strict as those  
11:23:10 4 stated in any relevant technical  
11:23:12 5 document.

11:23:12 6 All right. Peak  
11:23:17 7 identification. Here is -- the  
11:23:20 8 appropriate analytical characteristics  
11:23:22 9 must be documented for a particular  
11:23:23 10 assay. The laboratory must establish  
11:23:25 11 criteria for identification of a  
11:23:27 12 compound. There are examples of  
11:23:29 13 acceptable criteria.

11:23:31 14 THE PRESIDENT: This is  
11:23:32 15 slide 54.

11:23:33 16 MR. SUH: I'm sorry, slide  
11:23:34 17 54. Now, USADA's peak identification  
11:23:41 18 story has changed several times  
11:23:43 19 throughout this litigation. There are  
11:23:44 20 currently three different stories for  
11:23:46 21 how LNDD identified the target analytes  
11:23:49 22 and we will explain to you why they  
11:23:52 23 have shifted. The most important  
11:23:53 24 reason we have put this together is  
11:23:55 25 because we have been accused, we have

1 P R O C E E D I N G S

11:23:57 2 been accused of saying that GC/MS is  
11:23:59 3 the only way or the best way to  
11:24:01 4 identify your compounds in your IRMS  
11:24:04 5 sample. We have never said that. We  
11:24:07 6 are aware that there are better ways to  
11:24:09 7 identify the compounds in your IRMS  
11:24:11 8 sample. GC/MS for relative retention  
11:24:15 9 time from your GC/MS to your IRMS is  
11:24:19 10 one way. There are other ways, there  
11:24:20 11 are better ways. Okay.

11:24:22 12 But we didn't come up with  
11:24:23 13 this theory that they have to do it  
11:24:25 14 that way. We did not. We have been  
11:24:28 15 accused of saying we have said to them  
11:24:31 16 you must do your -- you must do your  
11:24:34 17 test that way. Not true. Let's look  
11:24:36 18 at how this arose.

11:24:37 19 Story 1: You match  
11:24:42 20 retention and relative retention times  
11:24:44 21 between GC/MS and GC/C/IRMS. That  
11:24:48 22 story -- actually, we're on A. Story  
11:24:50 23 A. Okay. Again, we go back to the  
11:24:56 24 request for documents, we've asked,  
11:24:59 25 slide 57, all documents that relate to

1 P R O C E E D I N G S

11:25:01 2 the identification of each of the peaks  
11:25:02 3 in the IRMS analysis. What we got  
11:25:08 4 back, USADA's response, LNDD is  
11:25:10 5 providing full GC/MS scans for each of  
11:25:13 6 the six peaks used in the IRMS analysis  
11:25:16 7 as well as for the standards. The  
11:25:17 8 reason we put this up here, by the way,  
11:25:20 9 is to show you there's no blank urine  
11:25:22 10 matching, there's no pattern matching,  
11:25:24 11 there's no peak matching, no peak  
11:25:26 12 finding. There's none of that. There  
11:25:28 13 is we're going to give you your GC/MS  
11:25:30 14 standards which by the way are labeled  
11:25:33 15 5-alpha, 5-beta, PdIol, they're  
11:25:36 16 labeled. We're going to give them to  
11:25:38 17 you. And that is their response.

11:25:41 18 Next slide.

11:25:41 19 This is from their pretrial  
11:25:45 20 brief. The second of the three steps  
11:25:46 21 is the pre-IRMS compound identification  
11:25:49 22 by GC/MS, the gold standard for  
11:25:51 23 compound identification. And it goes  
11:25:53 24 on and talks about retention time.  
11:25:55 25 This is pretrial brief at 41, this is

1 P R O C E E D I N G S

11:25:58 2 slide 59.

11:25:59 3 And of course, story A, Dr.

11:26:05 4 Brenna, and my question, how would I

11:26:07 5 know which peak is which in the IRMS

11:26:09 6 chromatogram, because he just had

11:26:11 7 numbers at the top. Those are the

11:26:13 8 isotope numbers. Answer, well, they

11:26:16 9 have retention times that match on the

11:26:18 10 previous GC/MS and the GC/MS delivers

11:26:24 11 structural information like aliquots

11:26:26 12 and that tells us which is which. We

11:26:29 13 didn't say you have to do it this way.

11:26:30 14 Their expert this is the way LNDD does

11:26:33 15 it. Their brief said this is the way

11:26:35 16 LNDD does it. Their responses, we're

11:26:37 17 going to give you the GC/MS

11:26:39 18 chromatograms. So that's what we

11:26:40 19 assumed. If you're going to do it that

11:26:42 20 way, you've got to do it right.

11:26:47 21 Well, this story doesn't

11:26:49 22 work. Why doesn't it work, because Dr.

11:26:53 23 Meier-Augenstein actually calculated

11:26:55 24 relative retention time and retention

11:26:57 25 time. In this graph you will see that

1 P R O C E E D I N G S

11:26:59 2 the difference in retention time, these  
11:27:03 3 are minutes and then is even what USADA  
11:27:05 4 admits is a better measure of relative  
11:27:07 5 retention time which is another box,  
11:27:09 6 shows a great variance. You've seen a  
11:27:11 7 lot in the briefs about oh, terrible,  
11:27:14 8 you can't use GC/MS in the  
11:27:16 9 declarations, excuse me, you can't use  
11:27:18 10 GC/MS to compare to IRMS, you can't do  
11:27:20 11 it because of plumbing length, you  
11:27:24 12 can't do it because of, oh, gosh, you  
11:27:27 13 can't do it because the method files  
11:27:28 14 aren't the same, you can't do it  
11:27:30 15 because any number of reasons.

11:27:31 16 But we're not the ones that  
11:27:33 17 said you can. We are just saying if  
11:27:36 18 you say you can, if this is the method  
11:27:38 19 you say you used, you've got to do it  
11:27:41 20 right.

11:27:43 21 MR. PAULSSON: Sorry, you  
11:27:43 22 just -- you've just lost me. If you go  
11:27:47 23 back to the previous slide which is the  
11:27:49 24 Brenna testimony. Is it your position  
11:27:55 25 based on the expert evidence you have

1 P R O C E E D I N G S

11:27:58 2 on your side that that testimony is  
11:28:00 3 accurate in terms of as a statement of  
11:28:03 4 what LNDD's configuration should have  
11:28:09 5 been --

11:28:10 6 MR. SUH: That's an excellent  
11:28:11 7 question and the straightforward answer  
11:28:13 8 to that question is frankly, we don't  
11:28:15 9 know. We don't know, we have never been  
11:28:19 10 given what we feel is an honest answer  
11:28:22 11 about that question. The only way -- I  
11:28:25 12 mean our experts are outside of the lab.  
11:28:29 13 Their experts, many of them are outside  
11:28:31 14 of the lab. The people who know are the  
11:28:33 15 technicians, but as you will see, their  
11:28:36 16 stories are going back and forth about  
11:28:38 17 what they did. We don't know.

11:28:40 18 We just know that their  
11:28:42 19 witnesses are willing to say whatever  
11:28:45 20 is convenient at the time the state of  
11:28:48 21 the evidence. And at the time this was  
11:28:51 22 convenient. Until they found out that  
11:28:54 23 the differences were too great.

11:28:56 24 MR. RIVKIN: That's very  
11:28:59 25 helpful. Let me ask a question

1 P R O C E E D I N G S

11:29:01 2 slightly differently. It's your burden  
11:29:02 3 to show that an ISL standard has not  
11:29:05 4 been met. What is the ISL standard  
11:29:10 5 that is not met if what you say is  
11:29:13 6 true?

11:29:13 7 MR. SUH: Sure. And we're  
11:29:14 8 getting there. It's the one we started  
11:29:17 9 with. Well there's two actually.  
11:29:19 10 Depending upon which version of this  
11:29:21 11 you believe. The first one is the  
11:29:25 12 uncertainty -- for purposes of  
11:29:27 13 identification, the laboratory must  
11:29:30 14 establish criteria for identification  
11:29:31 15 of a compound at least as strict as  
11:29:34 16 those stated in any relevant technical  
11:29:35 17 document. And if you look at the  
11:29:37 18 technical document it says --

11:29:40 19 MR. RIVKIN: What are you  
11:29:41 20 quoting from there?

11:29:44 21 MR. SUH: Slides 52 and 53.  
11:29:46 22 Before we get to that point, Mr.  
11:29:50 23 Rivkin, it is only our burden to show  
11:29:53 24 that if they are accredited for this  
11:29:56 25 method and they're not accredited for



1 P R O C E E D I N G S

11:29:57 2 this method. Why do you think the  
11:30:03 3 accreditation was such a big issue in  
11:30:06 4 pretrial motions? It's this right  
11:30:08 5 here. It is not our burden. They're  
11:30:11 6 not accredited. It just -- just wait.  
11:30:17 7 It actually gets quite a bit better.

11:30:20 8 MR. PAULSSON: If they were  
11:30:21 9 accredited this would be the standard?

11:30:26 10 MR. SUH: They have to have  
11:30:27 11 criteria for identification and they  
11:30:29 12 have to be as strict as they are in the  
11:30:30 13 technical document and appropriate  
11:30:32 14 analytical characteristic must be  
11:30:34 15 documented for a particular assay and  
11:30:35 16 the laboratory must establish criteria.

11:30:37 17 Here's the thing. Let me  
11:30:39 18 say this.

11:30:41 19 MR. PAULSSON: 54.

11:30:43 20 MR. SUH: I don't want to jump  
11:30:45 21 too far ahead, but the problem with what  
11:30:46 22 you've seen in the declarations and the  
11:30:48 23 reply declarations, the problem of what  
11:30:50 24 you see is that people are saying, oh,  
11:30:54 25 pattern matching plus blank urine

1 P R O C E E D I N G S

11:30:57 2 relative retention time or peak matching  
11:31:00 3 alone or just blank -- I mean none of  
11:31:03 4 these methods appear in their  
11:31:05 5 accreditation documents, we've never  
11:31:07 6 received an SOP, we've never even heard  
11:31:09 7 of these until the declarations came out.  
11:31:13 8 We didn't even -- this is nowhere in the  
11:31:15 9 record until now. And if the panel, and  
11:31:18 10 this is what I meant by it would be  
11:31:20 11 helpful for the panel to hear this with  
11:31:22 12 respect to striking our chain of custody  
11:31:25 13 argument, if the panel wants to apply the  
11:31:27 14 rule equally to both sides about new  
11:31:30 15 stories that come up, we're more than  
11:31:34 16 happy to do it. Because all we get are  
11:31:36 17 new stories. New stories are the bulk of  
11:31:39 18 their declarations.

11:31:44 19 MR. RIVKIN: Is there a  
11:31:45 20 particular ISL standard with respect to  
11:31:46 21 the use of relative retention times?

11:31:49 22 MR. SUH: Yes. Well, there  
11:31:50 23 is a particular standard with respect  
11:31:51 24 to retention times. There is a  
11:31:54 25 particular standard and it's in our

1 P R O C E E D I N G S

11:31:56 2 briefs. So I can go over it with you.

11:31:59 3 MR. RIVKIN: That one I've  
11:32:00 4 seen. That's why I was asking because  
11:32:02 5 that one doesn't say anything about  
11:32:03 6 relative retention time.

11:32:04 7 MR. SUH: No.

11:32:05 8 MR. RIVKIN: So then what is  
11:32:06 9 the standard if any that requires you  
11:32:09 10 to compare the retention times between  
11:32:12 11 the two instruments so that they should  
11:32:15 12 relate in that way?

11:32:17 13 MR. SUH: That's an  
11:32:18 14 excellent question.

11:32:20 15 MR. RIVKIN: Flattery will  
11:32:21 16 get you everywhere.

11:32:22 17 MR. SUH: It hasn't so far.

11:32:27 18 Look, retention time, what our  
11:32:29 19 experts will tell you is that, look,  
11:32:31 20 retention time, you're too far apart. I  
11:32:35 21 mean they violate the retention time  
11:32:38 22 standard and the relative retention time  
11:32:39 23 is not specifically mentioned there. Our  
11:32:41 24 experts will tell you that, look, you  
11:32:43 25 can't, this is far too great a

1 P R O C E E D I N G S

11:32:47 2 difference, we're talking about six  
11:32:48 3 minute difference. That's why this  
11:32:50 4 became an issue.

11:32:50 5 Dr. Brenna tried to say this  
11:32:52 6 at the last hearing, well, the  
11:32:54 7 difference in the column length or the  
11:32:57 8 plumbing, six minutes. You're telling  
11:33:00 9 me that the difference in the column --  
11:33:02 10 even he admitted this on cross  
11:33:03 11 examination -- is this and the plumbing  
11:33:06 12 that's in the thing is going to make a  
11:33:08 13 six minute difference. No. Now,  
11:33:10 14 either you have a different column or  
11:33:12 15 you have different method files or  
11:33:15 16 whatever. But the base is is that the  
11:33:19 17 test was not done properly. I mean the  
11:33:23 18 test was not done properly. We are  
11:33:25 19 looking at differences that are so  
11:33:27 20 gross that even they, even they are  
11:33:31 21 unwilling to defend them.

11:33:32 22 What they do is make up  
11:33:33 23 another story. They've got a different  
11:33:38 24 story. And if it's also true that  
11:33:39 25 you've got relative retention times and

1 P R O C E E D I N G S

11:33:41 2 there's no ISL, bear in mind that one  
11:33:44 3 of the stories you're going to see in a  
11:33:45 4 minute is that the relative retention  
11:33:47 5 times are against blank urine. Okay.  
11:33:50 6 Well, I mean I don't know where to  
11:33:55 7 begin with that. But it's just -- it  
11:33:58 8 is -- you can know by the fact, the  
11:34:02 9 indefensibleness of it comes from the  
11:34:05 10 fact that the story is no longer the  
11:34:09 11 same.

11:34:09 12 And our experts, and I'm  
11:34:12 13 sure their experts will testify that  
11:34:14 14 differences of six to eight minutes,  
11:34:16 15 assuming that the method files and the  
11:34:19 16 columns are the same, is just too  
11:34:22 17 great, it's too great a difference.  
11:34:24 18 We're talking about in the ISL  
11:34:27 19 differences of -- differences of .2,  
11:34:37 20 .2 minutes. It's -- anyway, so I hear  
11:34:42 21 your question, I hear your question.  
11:34:44 22 Identify for me the ISL. Well, first  
11:34:47 23 of all, they're not accredited so there  
11:34:49 24 you go.

11:34:50 25 But past that, we're getting

1 P R O C E E D I N G S

11:34:52 2 into a discussion about the ISL which  
11:34:55 3 I'm happy to do. But the ISL, Mr.  
11:34:59 4 Rivkin, cannot mean, it cannot mean  
11:35:02 5 that if there isn't a specific ISL yet  
11:35:05 6 the method and all the witnesses are  
11:35:06 7 telling, experts are telling you this  
11:35:09 8 is just too great and too unreliable  
11:35:11 9 that the panel can't get a comfortable  
11:35:13 10 satisfaction, that should not be a  
11:35:14 11 shield.

11:35:15 12 You know, homologous blood  
11:35:18 13 transfusion, blood doping, there are  
11:35:20 14 almost no ISLs written for homologous  
11:35:24 15 blood transfusion, does that mean that  
11:35:27 16 every HPD test is somehow shielded  
11:35:30 17 because there's no ISL. There just  
11:35:32 18 happens to be ISLs in this case. What  
11:35:34 19 you have to look at, fundamentally,  
11:35:37 20 we're not talking about tiny  
11:35:38 21 differences, these are not technical  
11:35:40 22 differences. These are differences  
11:35:41 23 that alter whether or not the result  
11:35:43 24 was accurate or not. These are not  
11:35:45 25 gotcha issues. They're really not.

## 1 P R O C E E D I N G S

11:35:48 2 We're not saying, oh, you know, you got  
11:35:50 3 the same operator, or oh, you know, you  
11:35:55 4 didn't follow this rule here, this is  
11:35:59 5 the test that's destroyed his life.  
11:36:04 6 Destroyed his life. And for them to  
11:36:08 7 then say the ISL is somehow, well,  
11:36:12 8 gosh, doesn't say the words relative  
11:36:14 9 retention times, we'll get it out of  
11:36:18 10 all witnesses that the method -- that  
11:36:23 11 the differences are too great that you  
11:36:25 12 see between the GC/MS and the IRMS in  
11:36:32 13 --

11:36:33 14 MR. RIVKIN: I distracted  
11:36:34 15 you from your story. Go ahead.

11:36:36 16 MR. SUH: Let's move on.  
11:36:45 17 One more thing. The method that's got  
11:36:48 18 to be documented under the 2003 IDCR  
11:36:52 19 and that was my point earlier, we  
11:36:54 20 didn't have SOPs, no accreditation  
11:36:57 21 documents. These are just stories that  
11:36:58 22 are coming out. So the other ISL  
11:37:00 23 violation is hey, if this is what  
11:37:02 24 you're going to say, well, where are  
11:37:04 25 the documents. And we've asked for

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11:37:05 2 them. Again, when we've asked for  
11:37:07 3 them, what have they given us? We're  
11:37:09 4 going to give you the GC/MS  
11:37:11 5 chromatograms. So there's your other  
11:37:13 6 ISL violation.

11:37:14 7 Story B: Peak identification  
11:37:20 8 is done by peak matching between GC/MS  
11:37:23 9 and GC/C/IRMS based on the GC/MS  
11:37:26 10 chromatograms with the 5-alpha AC and  
11:37:29 11 5-beta anchors provided by comparison of  
11:37:33 12 the retention times. This is a new  
11:37:34 13 story.

11:37:34 14 Let's go. Now Dr. Brenna,  
11:37:40 15 we have got his -- he's on the  
11:37:43 16 bandwagon again. We want to look at  
11:37:45 17 the overall pattern is what, we look at  
11:37:47 18 the intermediate sized peak, a small  
11:37:50 19 peak, we've got a pattern matching, I  
11:37:52 20 can then identify the last peak based  
11:37:55 21 on pattern and these center peaks,  
11:37:57 22 based on pattern and that's one of the  
11:37:59 23 ways I would identify peaks. So now we  
11:38:01 24 have pattern matching.

11:38:02 25 THE PRESIDENT: Excuse me,



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11:38:03 2 when you're saying you, you as compared  
11:38:06 3 to what?

11:38:08 4 MR. SUH: This is his new  
11:38:09 5 story, his rebuttal testimony.

11:38:11 6 THE PRESIDENT: Before us  
11:38:12 7 now?

11:38:13 8 MR. SUH: No, rebuttal.  
11:38:15 9 What happened was, this was at the AAA.  
11:38:17 10 He was cross examined. We got the  
11:38:18 11 retention time stuff up and now it's --  
11:38:21 12 right here, on the GC/MS we see a  
11:38:24 13 pattern so we can see peak heights.

11:38:27 14 THE PRESIDENT: So did he  
11:38:28 15 say something different in his evidence  
11:38:31 16 in chief or in a written brief? I'm  
11:38:34 17 just trying to understand what he's  
11:38:36 18 changing from according to you.

11:38:38 19 MR. SUH: 59, slide 59. Go  
11:38:54 20 to slide 66. This is the USADA  
11:39:12 21 appellate brief, the one submitted  
11:39:15 22 here. The lab, this is their story  
11:39:17 23 now, lab compares the peaks and the  
11:39:19 24 sequence of peaks from the GC/MS to  
11:39:21 25 identify the metabolites and the

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11:39:24 2 endogenous reference compounds.  
11:39:26 3 Specifically to identify the substances  
11:39:27 4 in question, one would compare the  
11:39:28 5 pattern of peak heights and the  
11:39:30 6 retention times in the GC/C/IRMS  
11:39:32 7 chromatogram anchored by the internal  
11:39:35 8 standard with the known retention time.  
11:39:37 9 The internal standard is the 5-alpha  
11:39:40 10 AC.

11:39:40 11 This is a declaration of Dr.  
11:39:50 12 Brenna. "In this instance, LNDD  
11:39:53 13 acquires GC/MS data for their test  
11:39:56 14 steroids in the sample and in their  
11:39:58 15 urine pools that are comparable to  
11:39:59 16 standard GC/MS data, thereby  
11:40:02 17 establishing the major peaks and their  
11:40:04 18 order of elution. IRMS therefore  
11:40:07 19 produces a pattern that reveals the  
11:40:08 20 identity of the peaks."

11:40:10 21 We have a declaration from  
11:40:12 22 Dr. Matthews, same kind of thing. We  
11:40:15 23 know the elution time, and then once  
11:40:17 24 the peak is identified it is a simple  
11:40:19 25 matter to find the 5-alpha Adiol and

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11:40:23 2 Pdiol from the peak elution patterns.

11:40:25 3 It is simple to find.

11:40:27 4 Going to your question, Mr.

11:40:28 5 Rivkin, earlier about what's the ISL

11:40:30 6 violation, this is not, and I challenge

11:40:33 7 anybody to say that this is an

11:40:35 8 accredited method. It must be a

11:40:39 9 documented method subject to validation

11:40:42 10 or else, leaving aside the overall

11:40:46 11 accreditation which we talked about

11:40:48 12 before, if they're claiming this is

11:40:50 13 their method there's no accreditation

11:40:52 14 for this method. It is a simple matter

11:40:54 15 to find them. We're just going to pick

11:40:55 16 out a chromatograph and we're going to

11:40:57 17 look for it and we're going to find it.

11:40:58 18 Let's go to the next one.

11:41:03 19 LNDD's identification of the analytes

11:41:04 20 of interest performed in two basic

11:41:08 21 steps. Again, as one can see from the

11:41:10 22 comparison there's an excellent

11:41:12 23 correlation between the patterns from

11:41:14 24 GC/MS and the patterns obtained from

11:41:16 25 the GC/C/IRMS.

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11:41:18 2 I think these are supposed  
11:41:30 3 to be the cover pages of the  
11:41:31 4 declarations. But this story is wrong.  
11:41:35 5 This story is wrong. Why is it wrong?  
11:41:37 6 Number 1, story B is not the testimony  
11:41:41 7 of LNDD's operators. You're going to  
11:41:45 8 see their story C is different.

11:41:48 9 Next point, again, to  
11:41:50 10 reiterate this point, no validation  
11:41:53 11 study, no SOP or accreditation  
11:41:55 12 documents exist. So even if it were  
11:41:57 13 their method they're entitled to no  
11:41:59 14 presumption.

11:42:00 15 3, Mix Cal Acetate never  
11:42:02 16 described as part of the identification  
11:42:04 17 process. Mix Cal Acetate is only a  
11:42:06 18 quality control.

11:42:07 19 Lastly, peak heights in the  
11:42:09 20 GC/MS, and this is the most critical  
11:42:11 21 one, and GC/C/IRMS chromatograms do not  
11:42:16 22 correlate. They correlate if you are  
11:42:18 23 trying to find the peak that you know  
11:42:20 24 to be there. But they don't correlate  
11:42:22 25 and we will show you plenty of examples

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11:42:25 2 where they won't correlate.

11:42:26 3 All right. So story B, we  
11:42:30 4 go from story B now to story C. Yes,  
11:42:36 5 Mr. Paulsson?

11:42:37 6 MR. PAULSSON: Is what you  
11:42:38 7 refer to as story B also what you call  
11:42:42 8 sometimes eyeballing?

11:42:45 9 MR. SUH: Peak matching and  
11:42:46 10 comparison is what I refer to as  
11:42:48 11 eyeballing. You look at it and --

11:42:50 12 MR. PAULSSON: This one.

11:42:51 13 MR. SUH: This is a little  
11:42:53 14 different. This is C.

11:42:55 15 MR. PAULSSON: So the answer  
11:42:56 16 to my question is yes?

11:42:57 17 MR. SUH: Yes. C, however  
11:42:59 18 has got a little bit of a couple of  
11:43:01 19 stuff. You've got some peak matching  
11:43:02 20 and then you have comparison of  
11:43:04 21 retention time and relative retention  
11:43:06 22 time to the blank urine. In other  
11:43:08 23 words, they're using the blank urine,  
11:43:10 24 and we'll get into this in a minute,  
11:43:13 25 but they're using the blank urine as --

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11:43:15 2 and the values in the blank urine from  
11:43:20 3 -- values in the blank urine as against  
11:43:22 4 their IRMS run. So instead of GC/MS,  
11:43:26 5 you remember the sequence, right,  
11:43:27 6 that's why I did this in the beginning,  
11:43:29 7 they run it against the blank urine.  
11:43:31 8 This is a new story. Okay. So let's  
11:43:33 9 go. And this is in their declarations,  
11:43:37 10 okay. Same thing, first you got some  
11:43:40 11 -- the first step is you compare the  
11:43:43 12 patterns and the retention times and  
11:43:46 13 relative retention times, and then you  
11:43:47 14 compare these to the blank urine. Not  
11:43:49 15 to the GC/MS. Okay.

11:43:59 16 Again, pre-identification is  
11:44:01 17 done visually. And the last retention  
11:44:04 18 times and relative retention times can  
11:44:06 19 be analyzed compared to the known and  
11:44:10 20 studied analytes in the blank urine.

11:44:14 21 So here we are in this  
11:44:16 22 version of the story, again, not  
11:44:18 23 accredited, first time we've heard it.  
11:44:21 24 We heard about it in the declarations.

11:44:23 25 So again, I'm not sure

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11:44:27 2 whether I want it struck or not given  
11:44:29 3 the progression of stories, but this is  
11:44:32 4 a different story. You compare this to  
11:44:36 5 the things that were originally  
11:44:38 6 floated, if we are going to have items  
11:44:41 7 struck in which we are talking about  
11:44:43 8 things that they have said which are  
11:44:45 9 false, well, I think you should go  
11:44:51 10 here's again.

11:44:51 11 Anyway, let's move on.

11:44:56 12 Dr. Buisson, same thing, same, same  
11:45:01 13 consistency.

11:45:02 14 Why is this story wrong? No  
11:45:12 15 validation study has been produced,  
11:45:14 16 peak heights again. Once against GC/MS  
11:45:17 17 and GC/C/IRMS do not correlate. And  
11:45:21 18 blank urine has repeatedly only been  
11:45:23 19 described as a quality control. Blank  
11:45:25 20 urine in their briefs, I'm sensitive to  
11:45:27 21 the time we're using, so we can do it  
11:45:29 22 as closing, but we can show you the  
11:45:33 23 cites where blank urine is listed as a  
11:45:36 24 negative control. It is not listed as  
11:45:39 25 a tool to identify your peaks. Never

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11:45:43 2 seen that anywhere. This is new. You  
 11:45:46 3 can't point to a discovery response or  
 11:45:49 4 a preexisting brief or testimony before  
 11:45:52 5 there was cross examination to  
 11:45:53 6 corroborate that this is true.

11:45:54 7 Now, now, moreover, and  
 11:45:58 8 here's the biggest problem -- let's  
 11:46:05 9 just move on. Let's just move on.

11:46:07 10 THE PRESIDENT: This might  
 11:46:08 11 be a convenient time for the morning  
 11:46:10 12 break. Does that suit you?

11:46:13 13 MR. SUH: That would be  
 11:46:14 14 fine.

11:46:20 15 THE PRESIDENT: We'll take  
 11:46:21 16 15 minutes.

11:46:23 17 (A recess was taken.)

12:05:29 18 THE PRESIDENT: Mr. Suh.  
 12:05:34 19 Please proceed.

12:05:37 20 MR. YOUNG: If we may, one  
 12:05:39 21 procedural matter. We have a new  
 12:05:41 22 person who's joined us, Janine Jumeau  
 12:05:45 23 who's one of our testifying experts.

12:05:47 24 THE PRESIDENT: Thank you  
 12:05:48 25 very much.



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12:05:50 2 MR. SUH: Just so that the  
12:06:16 3 panel is perfectly clear before we go  
12:06:18 4 to our last summary slide, the WADA  
12:06:22 5 technical document TD2003IDCR, I'm now  
12:06:27 6 referring to -- this is now -- this is  
12:06:30 7 not the one. We'll have to renumber  
12:06:35 8 this. This number is out of order.  
12:06:37 9 But the appropriate analytical  
12:06:39 10 characteristics must be documented for  
12:06:41 11 a particular assay. The laboratory  
12:06:43 12 must establish criteria for  
12:06:44 13 identification of a compound. But they  
12:06:47 14 must identify, they must -- excuse me,  
12:06:51 15 they must establish criteria for  
12:06:53 16 identification of a compound. This  
12:06:55 17 technical document I think addresses  
12:06:57 18 some of the issues that were raised  
12:06:58 19 before. And again, I mean as we look  
12:07:00 20 at the various stories that have been  
12:07:04 21 produced about how peak identification  
12:07:07 22 is conducted, there is no validation  
12:07:13 23 studies, there is no SOP, and there's  
12:07:17 24 no accreditation, and the fact that  
12:07:20 25 there is no validation study or no

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12:07:23 2 accreditation or no SOP is shown by the  
12:07:26 3 fact that all of these stories are a  
12:07:28 4 little bit different.

12:07:28 5 Let's move on.

12:07:30 6 The summary sheet that I'm  
12:07:35 7 going to show you next simply organizes  
12:07:40 8 the witnesses according to story A, B  
12:07:43 9 and C that we just covered and where  
12:07:45 10 you'll find the various provisions in  
12:07:48 11 the briefs.

12:07:57 12 Our next subject,  
12:08:00 13 chromatography and manual processing.  
12:08:05 14 Basically, in short, the ISL under  
12:08:09 15 5.4.4.2.1 requires that the method  
12:08:14 16 should avoid interference in the  
12:08:16 17 detection of prohibited substances or  
12:08:18 18 their metabolites, by components of the  
12:08:23 19 sample matrix, and that is the problem  
12:08:25 20 with poor chromatography is simply  
12:08:30 21 this. If your chromatograms are poor,  
12:08:33 22 they will show. They will be unable --  
12:08:37 23 you will be unable to determine  
12:08:40 24 isotopic value correctly.

12:08:41 25 I'd like to go over some of

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12:08:43 2 the principles and show you some  
12:08:45 3 examples of good and bad. So here are  
12:08:47 4 the principle of good chromatography.  
12:08:50 5 You have clean separation of peaks and  
12:08:52 6 baselines. You have peaks that are  
12:08:54 7 well separated. It goes to resolution.  
12:08:56 8 There are no shoulders or tails. Tails  
12:08:59 9 would be something that goes off like  
12:09:01 10 this. Shoulders would be something  
12:09:02 11 that would be like this.

12:09:03 12 The tails are often  
12:09:06 13 represented as asymmetrical peaks. And  
12:09:09 14 the reason why this is the case is when  
12:09:11 15 you look at a chromatogram it has a  
12:09:22 16 shoulder or a tail. What it often  
12:09:26 17 means is that a shoulder actually is --  
12:09:36 18 what you are actually looking at is two  
12:09:39 19 substances where the chromatograms are  
12:09:42 20 laid up on top of each other because  
12:09:45 21 they've eluted at the same time and  
12:09:47 22 therefore when you go to calculate the  
12:09:49 23 isotopic value of this you are  
12:09:51 24 including the isotopic value of  
12:09:53 25 whatever else exists. That's why it's

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12:09:55 2 good to have your peaks well separated  
12:09:57 3 with no shoulders or baselines. I mean  
12:09:59 4 if you were to look at it another way,  
12:10:08 5 you have a tail, you look at a  
12:10:09 6 chromatogram like this, it could very  
12:10:13 7 well be something like this. That  
12:10:15 8 appears as a tail but it would actually  
12:10:18 9 be two peaks, one on top of each other.

12:10:20 10 A lot of the preparation is  
12:10:24 11 designed to prevent interference in the  
12:10:28 12 sample. So that you are actually able  
12:10:30 13 to properly determine isotopic value.  
12:10:32 14 So let's take a look at an example of a  
12:10:34 15 good chromatogram. This is one from  
12:10:37 16 the UCLA Olympic Laboratory, these are  
12:10:40 17 reference gas pulses. This is the way  
12:10:42 18 UCLA does them, they separate them  
12:10:46 19 equally over the time. This is the  
12:10:48 20 equivalent to the F3 with 5-beta  
12:10:51 21 eluting first, 5-beta coming out second  
12:10:54 22 and the Pdiol coming out last. This  
12:10:56 23 will stand in stark contrast --

12:10:58 24 MR. PAULSSON: What is it?

12:11:00 25 What is it?

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12:11:01 2 MR. SUH: What is what?

12:11:03 3 MR. PAULSSON: This.

12:11:04 4 MR. SUH: This is a

12:11:06 5 chromatogram from the UCLA laboratory

12:11:10 6 of the F3 fraction, the 5-beta, 5-alpha

12:11:13 7 and Pd1ol, it would be the equivalent

12:11:16 8 of the F3 traction.

12:11:18 9 MR. PAULSSON: Of?

12:11:20 10 MR. SUH: Of an IRMS

12:11:21 11 chromatogram. Of a sample.

12:11:25 12 MR. PAULSSON: Somewhere,

12:11:26 13 something?

12:11:27 14 MR. SUH: Yes, unrelated to

12:11:29 15 this.

12:11:29 16 MR. PAULSSON: I understand.

12:11:30 17 But it is an example of a real sample?

12:11:33 18 MR. SUH: Yes. The purpose

12:11:34 19 is to show what -- I mean to show good

12:11:37 20 chromatography in testosterone

12:11:41 21 metabolites. So when we look to the

12:11:43 22 next ones, I'm going to go through four

12:11:45 23 of them as an example, stage 17, sample

12:11:48 24 A, stage 17, sample B, stage 11, which

12:11:55 25 is one of the other supposed positives,

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12:12:02 2 alleged positives in this case, which  
12:12:05 3 is stage 11, sample 3, fraction 3 and  
12:12:08 4 stage 15, sample B, fraction 3. This  
12:12:11 5 is the chromatography we see in this  
12:12:14 6 case. One of the things I want to  
12:12:15 7 point out, when we go back, can you go  
12:12:17 8 back to stage 17, sample A, and B,  
12:12:21 9 Todd. One of the things that we have  
12:12:23 10 seen in this case, and we argued about  
12:12:25 11 with USADA many times, is the fact that  
12:12:27 12 this is a compressed chromatogram, the  
12:12:31 13 scale of this is quite high. And I've  
12:12:34 14 heard, and you've probably seen  
12:12:36 15 testimony below that these look  
12:12:38 16 perfectly fine.

12:12:39 17 The problem is really one of  
12:12:42 18 scaling. If this chromatogram were  
12:12:44 19 about this high, if you go back to  
12:12:48 20 stage 11, which is slide 89, you know,  
12:12:56 21 you see that available space looks --  
12:13:00 22 is much closer to the top of the top  
12:13:02 23 peak and you actually are able to see  
12:13:04 24 more matrix interference. You might  
12:13:06 25 very well ask why is it that we're

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12:13:08 2 forced to look at paper chromatograms,  
12:13:12 3 and that is if you look at the record,  
12:13:14 4 there was a long fight about us trying  
12:13:16 5 to get the electronic data files in the  
12:13:18 6 case. We never did receive them. We  
12:13:20 7 were told we weren't entitled to. The  
12:13:22 8 reason as put forth by USADA is we  
12:13:25 9 would somehow tamper with the  
12:13:26 10 electronic data files, even though we  
12:13:28 11 only wanted a copy.

12:13:29 12 But this, if we had them we  
12:13:32 13 could plot out and exactly see what's  
12:13:35 14 going on in sample B and sample A of,  
12:13:38 15 frankly, any of the tests that were  
12:13:40 16 conducted. What we're left with is to  
12:13:42 17 look at the chromatograms. However,  
12:13:44 18 these chromatograms pose serious  
12:13:47 19 problems and it is important to know  
12:13:49 20 that the problems that we see that  
12:13:55 21 result out of peak co-elution can have  
12:14:02 22 a dramatic impact upon the final  
12:14:06 23 isotopic value of any peak, and that  
12:14:09 24 was -- that was displayed very  
12:14:12 25 pointedly in the AAA panel.

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12:14:15 2 If we could go to the next  
12:14:17 3 slide. Dr. Meier-Augenstein was asked  
12:14:20 4 on cross examination to run a  
12:14:22 5 calculation with respect to a peak that  
12:14:26 6 had assuming a minus 28.75 delta value  
12:14:30 7 and absorbing a peak, a very small peak  
12:14:33 8 with a minus 70 delta value, what  
12:14:36 9 difference would it have on your final  
12:14:37 10 delta/delta value. And it's minus --  
12:14:40 11 it was on cross examination he  
12:14:41 12 calculated it was minus 2 delta/delta.  
12:14:46 13 This is a rather lengthy portion of the  
12:14:49 14 cross examination below, but I would --  
12:14:52 15 I think it would be instructive at some  
12:14:54 16 point for you to turn your attention  
12:14:55 17 and read the cross examination of Dr.  
12:14:58 18 Meier-Augenstein as it relates to the  
12:15:01 19 effect of poor chromatography.

12:15:04 20 Okay. Poor chromatography,  
12:15:10 21 I have linked in this presentation with  
12:15:14 22 manual processing or manual  
12:15:16 23 integration. So important for us  
12:15:19 24 because there is an ISL that relates to  
12:15:23 25 data entry and reporting of --



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12:15:25 2 reporting processes and all changes to  
12:15:27 3 reported data that should be recorded  
12:15:30 4 with an audit trail. What manual  
12:15:33 5 processing does, and you'll see a  
12:15:37 6 demonstration of this which I think  
12:15:39 7 will be very, very instructive, is  
12:15:42 8 manual processing by changing the start  
12:15:45 9 and stop of different peaks on this  
12:15:49 10 software used in this laboratory on  
12:15:54 11 these samples can have a dramatic  
12:15:56 12 impact on your isotopic values such  
12:16:00 13 that you can literally get whatever  
12:16:03 14 result you want.

12:16:04 15 I'm not saying that the LNDD  
12:16:09 16 technicians started out attempting to  
12:16:11 17 find an adverse result. I'm not saying  
12:16:13 18 that. I'm just saying that small  
12:16:16 19 corrections and shifts can have a huge  
12:16:18 20 impact on isotopic values. And two  
12:16:23 21 things to remember about this. The  
12:16:29 22 first thing is this, is that they  
12:16:31 23 testified below, the technicians, that  
12:16:33 24 they do it all the time as a quality  
12:16:36 25 control. Processing is done on -- by

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12:16:42 2 way of computer algorithm.

12:16:46 3 What is happening is that  
12:16:48 4 laboratory technicians are replacing  
12:16:52 5 the computer algorithm with their own  
12:16:55 6 personal judgment of where a peak  
12:16:57 7 should start and end.

12:16:58 8 So if we look at the next  
12:17:02 9 slide, this is a slide that was in the  
12:17:04 10 presentation below, that if you look at  
12:17:07 11 where these dotted lines are and where  
12:17:09 12 these dotted lines move, are moved to,  
12:17:13 13 compared to the next slide, you can see  
12:17:15 14 that the isotopic values which are  
12:17:17 15 here, here, here and here, can change  
12:17:19 16 dramatically based upon the moving of  
12:17:23 17 those peak start and stop points. And  
12:17:26 18 that is how sensitive the manual  
12:17:30 19 integration process is.

12:17:35 20 MR. RIVKIN: What are the  
12:17:35 21 different colors in those?

12:17:37 22 MR. SUH: The different  
12:17:38 23 colors show where peaks -- let's see,  
12:17:41 24 is this the first one. Todd, go to  
12:17:43 25 slide -- go to the one preceding it.

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12:17:50 2 Right. Okay. The different colors,  
12:17:55 3 well, first of all, the dotted line  
12:17:57 4 here, this green line over here on the  
12:18:00 5 bottom is the baseline that's drawn.  
12:18:02 6 The lines that are drawn here from the  
12:18:04 7 solid dotted lines to the smaller  
12:18:06 8 dotted lines show where peaks start and  
12:18:12 9 end was shifted to. And what it will  
12:18:15 10 show you is the shift in isotopic  
12:18:18 11 values.

12:18:18 12 I mean, Mr. Rivkin, I think  
12:18:21 13 what the purpose of showing you this  
12:18:23 14 now is not to try to explain the entire  
12:18:26 15 process. It's so much better when it's  
12:18:28 16 interactive. We have the same  
12:18:30 17 software, same everything else and  
12:18:32 18 you'll see how this work. I want to  
12:18:34 19 make the point that manual integration  
12:18:36 20 can have a huge result.

12:18:37 21 And one other thing that we  
12:18:40 22 have to remember, and this is the next  
12:18:41 23 slide, this is the theory, that  
12:18:44 24 software in manual integration is not  
12:18:47 25 -- are not going to separate your

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12:18:49 2 peaks. They don't fix poor  
12:18:53 3 chromatography. It is not a tool to  
12:18:57 4 fix something that has already been  
12:18:58 5 done, poor data acquired and somehow  
12:19:02 6 will correct it, either manually or by  
12:19:05 7 your software.

12:19:07 8 And in fact, no one knows  
12:19:08 9 this better than Dr. Brenna who is  
12:19:11 10 spending enormous amounts of time and  
12:19:13 11 energy trying to create ever more  
12:19:16 12 sophisticated computer algorithms that  
12:19:19 13 will resolve pure chromatography, and  
12:19:22 14 it is difficult.

12:19:23 15 What we are talking about,  
12:19:25 16 as you will see here, is software which  
12:19:26 17 is very old on an instrument that is  
12:19:28 18 very old and it certainly didn't have  
12:19:30 19 this ability to resolve poor  
12:19:32 20 chromatography.

12:19:33 21 One last point on this issue  
12:19:35 22 which is is that IsoPrime-EA user manual,  
12:19:39 23 this is slide 95, when you read these  
12:19:43 24 pages, what is important to take away  
12:19:48 25 from this is that manual integration as

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12:19:52 2 described in the manual, the IsoPrime-EA  
12:19:58 3 user manual, is not meant to try to fix  
12:20:03 4 poor chromatography. It is used as a  
12:20:05 5 diagnostic tool. It says this right  
12:20:08 6 here, "once the method file parameter  
12:20:11 7 settings required are found, close,"  
12:20:14 8 after you conducted manual integration as  
12:20:16 9 a diagnostic tool, close out of the DP  
12:20:19 10 software." Make changes in the method  
12:20:20 11 run file and check them out with another  
12:20:24 12 single run. In other words, you don't  
12:20:25 13 get a poor chromatogram, try to move your  
12:20:28 14 points around and try to get some  
12:20:30 15 isotopic value you think is correct and  
12:20:34 16 simply go on through your sequence. It's  
12:20:36 17 a diagnostic tool.

12:20:36 18 It is a flawed methodology  
12:20:37 19 is what they say, but not in the way  
12:20:38 20 they are saying. It is not meant to  
12:20:40 21 try to take poor data or poor  
12:20:42 22 chromatograms or dirty chromatograms  
12:20:44 23 and somehow fix them by looking at it  
12:20:46 24 and move on. It is meant to go back so  
12:20:49 25 you have a diagnostic tool with your

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12:20:52 2 instrument which is not working well  
12:20:53 3 and make changes in the method run file  
12:20:55 4 and check them out with another single  
12:20:58 5 run.

12:20:58 6 Again, this is something  
12:20:59 7 that Simon Davis is going to testify  
12:21:03 8 about. He built and worked on many of  
12:21:05 9 these IsoPrime units. Not the  
12:21:07 10 IsoChrome unit that Ms. Jumeau worked  
12:21:11 11 on, but the IsoPrime unit which is the  
12:21:13 12 one used in this laboratory.

12:21:14 13 Okay. And we can get into  
12:21:18 14 this as we go along, but I know you've  
12:21:21 15 seen this chart, I know it's been  
12:21:23 16 referred to. One of the ways we know  
12:21:25 17 that the results are unreliable is that  
12:21:28 18 when the same samples are reprocessed  
12:21:32 19 with manual processing they yield  
12:21:35 20 dramatically different results. And if  
12:21:38 21 manual processing is in fact the  
12:21:41 22 quality control, as they use the term,  
12:21:43 23 it should result in getting quality  
12:21:46 24 results precise results, quality.  
12:21:50 25 Remember, precision and accuracy.

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12:21:53 2 Results that are precise.

12:21:54 3 Shooting your bullets all in  
12:21:58 4 the same group, not really in fact all  
12:22:00 5 over the place.

12:22:00 6 I know very well and I've  
12:22:03 7 heard it many times before from experts  
12:22:05 8 and from USADA's lawyers, well pick  
12:22:08 9 this value, it shows that the results  
12:22:10 10 got worse, or pick this, it shows that  
12:22:13 11 he still supports an adverse analytic  
12:22:17 12 finding.

12:22:17 13 But this is not reliable in  
12:22:18 14 that way. Not reliable any more than  
12:22:22 15 if you took a rifle, you benched it and  
12:22:25 16 your rifle was shooting bullets all  
12:22:28 17 over a target and you try to correct  
12:22:31 18 whatever was going on with your rifle,  
12:22:33 19 maybe you had problems with your  
12:22:37 20 ammunition or your powder or your  
12:22:39 21 barrels weren't clean or whatever, and  
12:22:41 22 you fired another group and it just  
12:22:43 23 went all over the place. But you still  
12:22:45 24 said, hey, look, one of those rounds  
12:22:49 25 hit the bull's eye, it must be

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12:22:51 2 accurate. That is not, first of all,  
12:22:55 3 consistent with any known scientific  
12:22:57 4 principle and it's certainly not  
12:22:59 5 consistent with commonsense.

12:23:00 6 So again, many of these  
12:23:03 7 issues we just have to alert you to as  
12:23:05 8 we get into the testimony of the  
12:23:06 9 witnesses.

12:23:06 10 But that is something to  
12:23:08 11 keep in mind.

12:23:08 12 All right, there are other  
12:23:10 13 ISL violations which you'll also hear  
12:23:12 14 about. There are data deletion issues,  
12:23:15 15 violations of the rules regarding the  
12:23:16 16 preparation of laboratory documents,  
12:23:17 17 and other strange practices that we've  
12:23:20 18 catalogued before. I think given the  
12:23:22 19 shortness of time what I would do is  
12:23:24 20 refer the panel to places in the record  
12:23:28 21 and we will cross examine on some of  
12:23:31 22 these issues.

12:23:32 23 I don't want to revisit the  
12:23:34 24 entirety of the case because it would  
12:23:35 25 be impossible to do so, but I do want



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12:23:37 2 to make this point with respect to ISL  
12:23:39 3 violations. Look, this is a laboratory  
12:23:41 4 that failed the ISL for the T/E test,  
12:23:43 5 has told you a number of different  
12:23:45 6 stories about how they do things which  
12:23:46 7 are contradicted by their writings and  
12:23:48 8 each other, and they have committed  
12:23:50 9 numerous other errors during this  
12:23:52 10 process and still yet what you hear  
12:23:54 11 from them is that no, look, take this  
12:23:56 12 value or take this value or look at  
12:23:58 13 this and maybe the F3 is okay or maybe  
12:24:01 14 this is okay. But that's not  
12:24:03 15 scientific and it's certainly not life.

12:24:06 16 These are the same people,  
12:24:07 17 the same technicians, the same  
12:24:09 18 laboratories that are doing the same  
12:24:11 19 sloppy practices. And they have  
12:24:14 20 resulted in a sloppy result. And I  
12:24:17 21 think when you look at the totality of  
12:24:18 22 the circumstances which this is  
12:24:20 23 certainly what this is, you cannot get  
12:24:22 24 a comfortable satisfaction that the  
12:24:25 25 results are accurate.

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12:24:26 2 Let me go to the last issue  
12:24:31 3 that I really want to talk about here.

12:24:33 4 MR. RIVKIN: Sorry, could I  
12:24:34 5 ask one last question about that  
12:24:36 6 accuracy point. How do you deal with  
12:24:38 7 the argument that putting aside all the  
12:24:40 8 issues that you raise about precision  
12:24:41 9 and accuracy and so forth, when the  
12:24:45 10 first panel's independent expert took  
12:24:47 11 the electronic data files, reran the  
12:24:50 12 files in a number -- the data in a  
12:24:53 13 number of different ways, that expert  
12:24:54 14 found evidence of adverse analytical  
12:24:58 15 finding?

12:25:00 16 MR. SUH: I think the  
12:25:01 17 important thing to bear in mind is that  
12:25:04 18 first of all, the values showed the --  
12:25:09 19 the values are jumping all over the  
12:25:11 20 place. I'll give you an example. If  
12:25:13 21 you pull up the chart. The blank  
12:25:15 22 urine, the supposed negative control  
12:25:17 23 jumped up to -- Todd, I need that chart  
12:25:22 24 up again. The one just ahead of this.  
12:25:29 25 These are the blanks, right. This is

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12:25:38 2 -- these are the blanks. In sample A  
12:25:45 3 and sample -- in the B sample. Nobody  
12:25:50 4 is going to contend, you know, minus 3  
12:25:53 5 is the delta/delta cutoff. Even  
12:25:55 6 accounting for the .8 measure of  
12:25:59 7 uncertainty, we're talking about a  
12:26:00 8 blank urine value that is going over  
12:26:02 9 minus 3, I mean is very, very close to  
12:26:06 10 minus 3.8.

12:26:09 11 The answer to your question  
12:26:11 12 is, number 1, the chromatograms are so  
12:26:15 13 poor you cannot achieve accurate  
12:26:16 14 results. And just like if you were  
12:26:18 15 shooting at a target where your rounds  
12:26:21 16 are going all over the place because  
12:26:23 17 your rifle is no good, that doesn't  
12:26:25 18 mean you can pick the rounds that hit  
12:26:29 19 at a certain location in order to  
12:26:31 20 determine that this, yes, this  
12:26:35 21 particular round must be accurate.

12:26:38 22 MR. RIVKIN: So the answer  
12:26:39 23 to the question I posed as I'm hearing  
12:26:43 24 you is that what the expert was able to  
12:26:46 25 do with the electronic data is

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12:26:48 2 irrelevant because the data itself was  
12:26:50 3 unreliable?

12:26:51 4 MR. SUH: Yes, absolutely.

12:26:53 5 It's absolutely unreliable. And if it  
12:26:55 6 were reliable, what you would see is  
12:26:58 7 consistency in results. Bear in mind,  
12:27:00 8 I mean perhaps I haven't made myself  
12:27:02 9 clear, but the original result is done  
12:27:04 10 with manual processing. Okay. This  
12:27:07 11 original result done with manual  
12:27:09 12 processing. So the E minus the etio  
12:27:16 13 minus the 11 ketoetio, this is the  
12:27:19 14 sample right here, goes from minus 2.02  
12:27:22 15 to minus .35. This is the same  
12:27:26 16 process. Both were manually processed.  
12:27:31 17 You go from minus 3.51 to minus 1.61 in  
12:27:37 18 the andro minus 11 ketoetio. You look  
12:27:42 19 at the variations in these numbers as  
12:27:44 20 they move around. If the data were  
12:27:47 21 good and the method were good, you  
12:27:49 22 would have reproducibility.

12:27:52 23 That's what science is.

12:27:54 24 Science is using instruments that are  
12:27:57 25 accurate and reproducible.

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12:27:59 2 That's -- before we got into  
12:28:01 3 this whole debate about picking, well,  
12:28:04 4 I mean -- I could tell you exactly what  
12:28:06 5 they've said, I've heard it. Look, the  
12:28:08 6 minus 6.39 on the 5-alpha minus the  
12:28:12 7 Pdiol went from minus 6.39 to minus  
12:28:17 8 7.19. Of course he's guilty. You know  
12:28:19 9 what, don't look at any of these other  
12:28:21 10 stuff, gosh, that looks terrible,  
12:28:23 11 forget about all that. What we want  
12:28:25 12 you to do is look at this. I'll tell  
12:28:27 13 you it's just like -- it's just like  
12:28:30 14 when you sight your rifle. If your  
12:28:32 15 rifle is sighting rounds and they are  
12:28:35 16 going all over the place, you don't say  
12:28:37 17 your rifle is accurate. You say  
12:28:39 18 there's something wrong with your  
12:28:41 19 rifle.

12:28:41 20 And that's the problem.  
12:28:44 21 That is the problem with cherry-picking  
12:28:46 22 this data. That is exactly what it is.

12:28:48 23 And supporting -- I would  
12:28:52 24 even say this, Mr. Rivkin, because I've  
12:28:57 25 heard this argument many, many times,

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12:29:00 2 if we look at everything in advance of  
12:29:02 3 this as being clean -- clean laboratory  
12:29:06 4 procedures, you know, following the  
12:29:09 5 ISL, consistent stories, you know, I'll  
12:29:14 6 tell you, if you looked at the totality  
12:29:17 7 of this picture and you looked at this  
12:29:18 8 and you saw all of these varying in the  
12:29:21 9 same amount and proportion, frankly,  
12:29:26 10 I'm inclined to agree with you, there's  
12:29:27 11 a problem. But that's not this case.  
12:29:31 12 That's not this case.

12:29:32 13 We have numerous violations  
12:29:35 14 of procedure and commonsense and bad  
12:29:38 15 data, and to pick these out, to pick  
12:29:42 16 out values and say well these ones are  
12:29:46 17 still fine, no scientist would tell you  
12:29:48 18 that that's okay. I mean that's not a  
12:29:52 19 scientific method.

12:29:54 20 Ultimately this is a case  
12:29:55 21 about science and following the ISL and  
12:29:58 22 documenting your procedures. No one  
12:29:59 23 would say, look at it this way. No one  
12:30:02 24 would accredit this method. I'll tell  
12:30:05 25 you what, here's your method, you run

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12:30:07 2 your samples, you get values all over  
12:30:09 3 the place, maybe your blanks go above  
12:30:12 4 minus 3, maybe they go 3.65. Forget  
12:30:16 5 about your blanks, forget about your  
12:30:18 6 quality controls, forget about  
12:30:19 7 precision, forget about anything, all  
12:30:21 8 you need to do to find somebody guilty  
12:30:24 9 of an adverse -- of an anti-doping  
12:30:27 10 offense is you go somewhere in your  
12:30:30 11 whole process and you pick out  
12:30:32 12 something that you can find and there  
12:30:36 13 you have it. It's not a method. It's  
12:30:40 14 not science. It's not right. And it's  
12:30:44 15 not the rules by which we are supposed  
12:30:45 16 to survive under.

12:30:46 17 Let's go to chain of custody  
12:30:52 18 unless -- okay. Chain of custody.  
12:30:58 19 This is our last issue. Chain of  
12:31:01 20 custody has very well defined  
12:31:06 21 International Standards -- excuse me,  
12:31:09 22 standards under the ISL. I'm going to  
12:31:13 23 read from some of them because the  
12:31:15 24 language is so important and because it  
12:31:17 25 contradicts really a lot of what you

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12:31:18 2 see in the declarations. Let me begin,  
12:31:21 3 "The documentation of the sequence of  
12:31:23 4 persons in possession of the sample and  
12:31:25 5 any portions of the sample taken for  
12:31:27 6 testing. Comment: A laboratory  
12:31:31 7 internal chain of custody," which is  
12:31:34 8 what we have here "is generally  
12:31:36 9 documented by a written record of the  
12:31:37 10 date, location, action taken and the  
12:31:39 11 individual performing an action with a  
12:31:40 12 sample or aliquot."

12:31:43 13 Now we go on to the  
12:31:44 14 laboratory internal chain of custody is  
12:31:46 15 documentation that records the movement  
12:31:50 16 of samples and sample aliquots during  
12:31:52 17 analysis. The movement within the  
12:31:54 18 laboratory, the laboratory internal  
12:31:55 19 chain of custody shall be a continuous  
12:31:57 20 record, shall be a continuous record of  
12:32:00 21 individuals in possession of the  
12:32:01 22 samples or sample aliquots.

12:32:03 23 And the entry into the  
12:32:04 24 laboratory internal chain of custody  
12:32:06 25 should be completed at the time that



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12:32:07 2 any change of possession occurs.

12:32:09 3 Contemporaneous record.

12:32:11 4 Lastly, when not in an  
12:32:13 5 individual's possession it should be  
12:32:14 6 documented that a sample or aliquot is  
12:32:16 7 in a controlled zone. Documented.  
12:32:20 8 You've heard a lot of testimony in the  
12:32:22 9 declarations where talk about the fact  
12:32:24 10 that look, I remember -- and you have  
12:32:27 11 an extreme from one end of the extreme.  
12:32:29 12 You know what the laboratory, the  
12:32:32 13 entire laboratory is a controlled zone.  
12:32:34 14 So really we've complied with the ISL.  
12:32:38 15 Not true. When not in an individual's  
12:32:41 16 possession, it should be documented  
12:32:43 17 that a sample or aliquot is in a  
12:32:46 18 controlled zone. These are the rules  
12:32:48 19 that they must follow and they're well  
12:32:52 20 laid out.

12:32:52 21 So let's look at the first  
12:32:54 22 story that we're faced with which is,  
12:32:57 23 story X, chain of custody is equivalent  
12:33:00 24 to the document package. Now, of  
12:33:03 25 course TD2003LDOC, all internal chain

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12:33:08 2 of custody documents must be included  
12:33:09 3 in the document packet. As you will  
12:33:11 4 see, this turns out not to be true.  
12:33:14 5 And I think that the USADA would even  
12:33:19 6 admit this, that all of the internal  
12:33:21 7 chain of custody documents were not in  
12:33:23 8 the document packet.

12:33:24 9 The next document -- I'm  
12:33:32 10 sorry, can you go to slide 102. What  
12:33:39 11 we have -- we're going to see a lot of  
12:33:41 12 this form. It's USADA 253. This is  
12:33:43 13 the form that was inside the document  
12:33:46 14 package. 253 is inside the document  
12:33:52 15 package. And that's what was  
12:33:54 16 originally relied on for chain of  
12:33:56 17 custody.

12:33:57 18 Now, that turned out not to  
12:33:59 19 be correct. Chain of custody did not  
12:34:03 20 equal the document package. It was  
12:34:05 21 wrong.

12:34:05 22 Because in USADA's pretrial  
12:34:09 23 response brief USADA provided  
12:34:11 24 additional LNDD bottle chain of custody  
12:34:14 25 documentation which LNDD does not

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12:34:16 2 normally provide with the documentation  
12:34:18 3 to try and satisfy chain of custody  
12:34:20 4 requirements. So story Y becomes chain  
12:34:23 5 of custody equals document package plus  
12:34:26 6 the new discovery.

12:34:27 7 All right. Let's point out  
12:34:30 8 the following things about the document  
12:34:33 9 package and the forms. First of all,  
12:34:35 10 USADA 253 is not a chain of custody  
12:34:38 11 document. It is a summary document.  
12:34:41 12 This is admitted by USADA.

12:34:43 13 Secondly, USADA supplemented  
12:34:48 14 the record of LNDD by producing four  
12:34:50 15 new documents. These are LNDD 1590,  
12:34:53 16 91, 92 and 97.

12:34:55 17 Next, with the addition of  
12:34:58 18 the produced documents, individual  
12:34:59 19 laboratory documents support movement  
12:35:02 20 of the sample bottle in the laboratory.  
12:35:04 21 So that's what the pretrial response  
12:35:08 22 brief said about the additional  
12:35:09 23 documents. And again, USADA admitted  
12:35:12 24 these are documents that they don't  
12:35:13 25 normally provide.

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12:35:14 2 Okay. What did the AAA  
12:35:19 3 panel do? Because we presented this or  
12:35:21 4 many of these issues below. They  
12:35:22 5 acknowledged the gap in the chain of  
12:35:24 6 custody between Cynthia Mongongu and  
12:35:27 7 the documents provided. The AAA  
12:35:30 8 majority panel disregarded Cynthia  
12:35:33 9 Mongongu's testimony that she only had  
12:35:35 10 the bottle for two to five minutes.  
12:35:36 11 And the panel reviewed documents and  
12:35:38 12 said they were satisfied that the  
12:35:39 13 documents support the location of the  
12:35:40 14 sample bottle at the laboratory.

12:35:42 15 We submit to you that the  
12:35:44 16 majority panel below could not have,  
12:35:47 17 could not have been satisfied that the  
12:35:50 18 documents support the location of the  
12:35:51 19 sample bottle at the laboratory. We'll  
12:35:53 20 show you why. We have the documents  
12:35:55 21 and we'll lay it out for you.

12:35:57 22 Oh, by the way, also, by the  
12:36:07 23 same token, Ms. Ayotte declared that  
12:36:10 24 she also was able from the different  
12:36:12 25 documents provided by the laboratory to

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12:36:13 2 follow who had possession of the  
12:36:15 3 bottles and aliquots, or where they  
12:36:17 4 were stored. So she was basically  
12:36:19 5 saying the same thing as the AAA panel  
12:36:22 6 below. This, however, is not possible.  
12:36:32 7 The contradictory documents, there are  
12:36:34 8 documents in this chain of custody that  
12:36:36 9 contradict each other. You cannot  
12:36:39 10 resolve these contradictions between  
12:36:42 11 LNDD 1590 and 91 and USADA 0006 versus  
12:36:47 12 other documents. You cannot resolve  
12:36:49 13 these contradictions, you cannot  
12:36:50 14 resolve them without testimony which is  
12:36:53 15 why we got so many reply decs that talk  
12:36:56 16 about this which says I remember this,  
12:36:58 17 I remember that or I made two mistakes  
12:37:00 18 here. You can't do it.

12:37:01 19 Documents with missing  
12:37:02 20 information. The classic example is  
12:37:05 21 USADA 0006 which is the refrigeration  
12:37:09 22 log for -- USADA 0006.

12:37:13 23 Improper support, we were  
12:37:14 24 given SOPs of where things should be  
12:37:17 25 stored to support where they in fact

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12:37:19 2 were stored.

12:37:20 3 So this method does not

12:37:24 4 comply with the LDOC. Not all

12:37:27 5 documents in the document packet

12:37:28 6 support the chain of custody.

12:37:29 7 And lastly, many of these

12:37:31 8 documents were not contemporaneously

12:37:33 9 made, they were summary documents that

12:37:34 10 were put together after. And in fact,

12:37:37 11 even the testimony when you read it

12:37:40 12 carefully in the reply decs, even that

12:37:41 13 testimony is clear that what they were

12:37:43 14 doing is simply recounting the

12:37:45 15 documents that are part of what has

12:37:47 16 already been provided.

12:37:48 17 So let's demonstrate,

12:37:50 18 because it is hard to sort of put this

12:37:53 19 together, what happens. Here's the

12:37:55 20 chain of custody for the A sample. It

12:37:58 21 arrives in the laboratory. First thing

12:38:00 22 we note is that the time says 9 hours

12:38:02 23 and 35 up here. Now, first of all,

12:38:06 24 when you compare that to the next

12:38:09 25 document it indicates 21:35. These are

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12:38:16 2 two different times because typically  
12:38:17 3 at the laboratory they're on a 24 hour  
12:38:20 4 clock. 9 hours and 35 minutes is a.m.  
12:38:23 5 and 21 hours and 35 minutes is p.m.  
12:38:26 6 Those are in fact two different times  
12:38:28 7 and we received a declaration that it  
12:38:29 8 could not have been the a.m., but only  
12:38:31 9 the p.m. But you wouldn't know that  
12:38:33 10 but for the testimony that came in.

12:38:34 11 Let's go to the next slide.

12:38:40 12 The next slide shows a break in the  
12:38:42 13 chain of custody as you go to -- pull  
12:38:49 14 up the next slide. As you go to 0006.

12:38:55 15 MR. PAULSSON: Sorry, what  
12:38:56 16 was the point of the 9:35?

12:38:58 17 MR. SUH: They're inconsistent  
12:39:00 18 times set forth in the document. 9:35  
12:39:02 19 versus 21:35. We're just going through  
12:39:05 20 all of it. 0006 is the refrigeration  
12:39:10 21 log. First of all, I would like to point  
12:39:13 22 out we received a lot of documents that  
12:39:15 23 look exactly like this, incredibly  
12:39:17 24 difficult to read and for all practical  
12:39:19 25 purposes blacked out. However, what you

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12:39:27 2 see as we go through this -- and Todd,  
12:39:29 3 why don't we put up all of the bullets.  
12:39:32 4 So best as we can tell the refrigerator  
12:39:36 5 number looks like RN or R1. We're not  
12:39:39 6 sure because of the illegibility.

12:39:43 7 The other rule LCOC requires  
12:39:46 8 that there be an operator number, that  
12:39:49 9 the -- requires the name or initials.  
12:39:51 10 And what is on here is only operator  
12:39:53 11 number. You're forced to go back and  
12:39:55 12 match up the number with name and  
12:39:58 13 initials from other parts of the  
12:40:00 14 document. Why is that not okay? Well  
12:40:03 15 the reality is your name and initials  
12:40:06 16 give you -- they're much more personal  
12:40:08 17 to you than an identification number  
12:40:10 18 and that identification number may very  
12:40:13 19 well cause a problem that we're going  
12:40:14 20 to see comes later about who did what  
12:40:17 21 when.

12:40:17 22 Okay. The other thing, and  
12:40:20 23 this is the biggest thing, is that all  
12:40:22 24 it shows is that sample A -- sample  
12:40:26 25 995474 was checked into the



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12:40:27 2 refrigerator log, it doesn't specify  
12:40:30 3 whether or not it's A or B. So we  
12:40:32 4 don't really know exactly where A or B  
12:40:34 5 is. We just know that the sample was  
12:40:37 6 checked in and the A or the B could  
12:40:38 7 have gone elsewhere.

12:40:39 8 So the next issue is that  
12:40:42 9 when we leave the refrigerator, we have  
12:40:47 10 two documents. We have a document that  
12:40:53 11 shows operator 44 took it out of the  
12:40:57 12 fridge at 7:25, this is sample A. We  
12:41:01 13 also have a document that operator 42  
12:41:04 14 took it out at 7:30. These documents  
12:41:06 15 cannot both be correct. And as you  
12:41:10 16 will see from the reply declarations  
12:41:11 17 what they said is well -- one of them  
12:41:13 18 said well, I made a mistake. I made  
12:41:15 19 mistakes. This document isn't correct.

12:41:18 20 Moreover, when you look at  
12:41:20 21 the refrigerator log, there is no  
12:41:24 22 record of the bottle ever having been  
12:41:26 23 removed from the refrigerator log. In  
12:41:30 24 other words, you've got these two  
12:41:31 25 stories, you know, operator 44 taking

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12:41:35 2 it out at 7:25, and operator 42 taking  
12:41:39 3 out at 7:30, but the refrigerator log  
12:41:43 4 never shows the bottle leaving so you  
12:41:44 5 can't even go back here to the  
12:41:46 6 refrigerator log even if you could read  
12:41:48 7 it. I mean we looked at it as  
12:41:50 8 carefully as we could. There's no --

12:41:52 9 MR. PAULSSON: You're saying  
12:41:53 10 one could read it well enough to say  
12:41:55 11 that it doesn't contain something?

12:41:57 12 MR. SUH: Yes. Todd, can  
12:41:58 13 you go back to this and use your little  
12:42:00 14 magnifier. Go back to the slide that  
12:42:02 15 just has the refrigerator log on it.  
12:42:08 16 What we did in order to try to read  
12:42:09 17 this document is we did this, and what  
12:42:13 18 it does is it magnifies the pixels. If  
12:42:20 19 you go to the columns, Todd.

12:42:29 20 MR. PAULSSON: We're looking  
12:42:30 21 for a space that says taken out at some  
12:42:32 22 time.

12:42:33 23 MR. SUH: Yes.

12:42:34 24 MR. PAULSSON: How do you  
12:42:35 25 find that?

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12:42:38 2 MR. SUH: It should be right  
12:42:39 3 here. Here's sample 995474, right  
12:42:43 4 here. And it should record a movement  
12:42:48 5 with the sample being removed. Mr.  
12:42:54 6 Paulsson, in doing this exercise we are  
12:42:57 7 even giving LNDD the benefit of the  
12:42:59 8 doubt. I suppose we could simply say,  
12:43:01 9 look, this document is illegible, we  
12:43:03 10 are saying it's illegible, we can't  
12:43:06 11 determine it. In fact, if you do look  
12:43:08 12 at it very carefully you will be able to  
12:43:11 13 parse out the dates. In fact, do that  
12:43:14 14 again, Todd, if you can make it even a  
12:43:17 15 little bigger.

12:43:18 16 In any case, I mean we were  
12:43:39 17 able to look, it's in this row right  
12:43:42 18 here, sample 995474, if you take the  
12:43:45 19 time you can see it on paper. We did  
12:43:48 20 it all different ways. We lightened  
12:43:50 21 the Xerox copy. We threw a high  
12:43:53 22 contrast on it. Just to reemphasize  
12:44:05 23 the point. It took us a long time to  
12:44:08 24 figure this out. It was very  
12:44:10 25 difficult. We lightened the

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12:44:11 2 background, we did all this, but there  
12:44:13 3 is no record of this bottle moving out.

12:44:14 4 Let's move on. So once you  
12:44:23 5 get to, Todd, maybe you could go to --  
12:44:26 6 here we are, we have this problem, no  
12:44:29 7 record of it being removed, we have two  
12:44:31 8 different stories. These stories are  
12:44:32 9 not resolvable. It doesn't show it  
12:44:36 10 being removed, it shows it being  
12:44:38 11 removed at a different time by a  
12:44:40 12 different person, different time by a  
12:44:41 13 different person.

12:44:42 14 We're not sure how to show  
12:44:43 15 this to you. What we did was we  
12:44:45 16 assumed that LNDD was telling us the  
12:44:47 17 truth and we picked what they have told  
12:44:48 18 us that their accurate purported chain  
12:44:53 19 of custody document, this one right  
12:44:54 20 here. And if you go to the next stage  
12:44:57 21 it will show you that there was a  
12:44:59 22 failure to record an intra-laboratory  
12:45:01 23 transfer from where operator 19  
12:45:04 24 received the bottle at L 1591. There  
12:45:07 25 were also two other intra-laboratory

1 P R O C E E D I N G S

12:45:11 2 transfers that were not recorded from  
12:45:13 3 here to here.

12:45:15 4 There is no documentary  
12:45:17 5 evidence establishing a transfer from  
12:45:18 6 Cynthia Mongongu to Ester Cerpolini,  
12:45:23 7 USADA 119.

12:45:25 8 And then lastly, there is no  
12:45:27 9 record of a sample bottle moving to  
12:45:31 10 CF.FR 3, refrigerator there and there's  
12:45:36 11 no record of the sample bottle being  
12:45:38 12 moved to CH.FR 5 which is what we were  
12:45:40 13 told. If you put up the total chain of  
12:45:42 14 custody. Here is the issue, you have  
12:45:45 15 this issue here with the refrigerator  
12:45:47 16 log, it doesn't show it coming out,  
12:45:49 17 these two conflict, you show this  
12:45:51 18 transfer to here, you show a transfer  
12:45:52 19 to here, no intra-laboratory transfer,  
12:45:56 20 here, here no intra-laboratory  
12:45:56 21 transfer, here, here, and then at the  
12:45:57 22 end no record of which refrigerator  
12:45:59 23 they've gone into.

12:46:02 24 THE PRESIDENT: Can I ask a  
12:46:03 25 question here. Are the refrigerators

1 P R O C E E D I N G S

12:46:05 2 in the same room or different rooms?

12:46:07 3 MR. SUH: I believe they are

12:46:08 4 in -- we don't know.

12:46:13 5 THE PRESIDENT: Okay.

12:46:14 6 MR. RIVKIN: And Mr. Suh,

12:46:15 7 let me ask you the question. Where you

12:46:17 8 have the blue arrows where you say the

12:46:19 9 transfer was documented, how was the

12:46:21 10 transfer documented in those

12:46:22 11 circumstances? Was there a --

12:46:25 12 MR. SUH: They're recorded

12:46:26 13 on the form. You can see the entries

12:46:28 14 with the time and the date and the

12:46:29 15 operator.

12:46:30 16 MR. RIVKIN: Showing a

12:46:31 17 transfer from one person to the next?

12:46:34 18 MR. SUH: Yes.

12:46:35 19 MR. RIVKIN: And so where

12:46:36 20 you say is no evidence of --

12:46:41 21 MR. SUH: An intra-laboratory

12:46:43 22 transfer here and here.

12:46:44 23 MR. RIVKIN: How is that not

12:46:45 24 shown by simply looking at two documents

12:46:48 25 showing one person had it at one time and

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12:46:51 2 another person had it at another time?

12:46:53 3 MR. SUH: Because it doesn't  
12:46:54 4 show the movement of the bottle in the  
12:46:56 5 laboratory.

12:46:56 6 MR. RIVKIN: Where the blue  
12:46:58 7 arrows are shown, how does that -- how  
12:47:00 8 is it shown, that's what I'm trying to  
12:47:02 9 see what the difference is?

12:47:03 10 MR. SUH: That way, that  
12:47:04 11 there's a recording of a -- there's a  
12:47:07 12 document that shows it went from person  
12:47:08 13 A to person B. In other words --

12:47:10 14 MR. RIVKIN: And what was  
12:47:11 15 the procedure -- was there a procedure  
12:47:16 16 that you've seen in the documents to  
12:47:18 17 record that?

12:47:20 18 MR. SUH: No. No. I mean  
12:47:22 19 it would be just to be perfectly clear  
12:47:25 20 about this, there are -- let's say --  
12:47:27 21 well, let's say Dan Paul and myself  
12:47:32 22 were technicians. What we have is Dan  
12:47:34 23 has the bottle at one o'clock, Paul has  
12:47:36 24 the bottle at 3 o'clock, and I have the  
12:47:39 25 bottle at 5 o'clock. There are two

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12:47:41 2 hour gaps between each -- between us.  
12:47:45 3 I could have gotten it at 5 o'clock, I  
12:47:47 4 could have gotten it at 3:01. I mean  
12:47:50 5 if he was doing something with it that,  
12:47:52 6 say, took five minutes and likely I  
12:47:54 7 wouldn't have it at 3:05. Those are  
12:47:56 8 the kind of gaps we see here, gaps in  
12:47:59 9 timing where you don't know where the  
12:48:01 10 bottle is. You know I have it at five,  
12:48:04 11 you know Paul has it at three, you know  
12:48:07 12 Dan has it at one, but you don't know  
12:48:09 13 where it is the rest of the time and  
12:48:10 14 that is what is required. That is what  
12:48:13 15 is required, I mean by the plain  
12:48:14 16 language, to show your intra-laboratory  
12:48:17 17 transfers.

12:48:18 18 Let's go to B. We are going  
12:48:27 19 to turn first to USADA 7, the beginning  
12:48:31 20 part of this was the part which was  
12:48:32 21 subject to the motion to strike this  
12:48:36 22 morning. So we're going to start with  
12:48:39 23 USADA 7. Again, very difficult  
12:48:43 24 document to read, but it basically says  
12:48:47 25 that the A and B bottles were coupled



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12:48:49 2 or kept together in some way. And it  
12:48:53 3 shows a transfer to USADA 251. Let's  
12:48:59 4 assume that this transfer is true. The  
12:49:06 5 first record we have, Todd, if you  
12:49:09 6 could go to the next slide, the first,  
12:49:11 7 USADA 251 doesn't say where the sample  
12:49:15 8 came from. This is the first record  
12:49:17 9 since the last USADA 007 that we have  
12:49:23 10 that shows the location of the bottle.  
12:49:25 11 And that is the break in the B sample  
12:49:30 12 right now.

12:49:30 13 So the short of all of this  
12:49:37 14 is that the chain of custody equals the  
12:49:40 15 document package plus new discovery  
12:49:43 16 doesn't work. It's not right. You  
12:49:45 17 can't do it because you have documents  
12:49:46 18 that show contradictory things.

12:49:48 19 So what you need to do is  
12:49:49 20 what they have done in this hearing,  
12:49:51 21 which is they show chain of custody  
12:49:54 22 equals the document package plus new  
12:49:56 23 discovery plus testimony. So now their  
12:49:59 24 chain of custody must depend upon the  
12:50:01 25 declarations that you have seen,

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12:50:03 2 declarations where even the witnesses  
12:50:06 3 themselves say, in essence, they  
12:50:12 4 require all these witnesses to do it,  
12:50:14 5 that basically they rely upon the  
12:50:16 6 memory of performing a certain task,  
12:50:18 7 they say things like I performed this  
12:50:20 8 task, therefore I must have had the  
12:50:21 9 sample bottle for the period of time in  
12:50:23 10 question, and even in this process as  
12:50:28 11 you see from the declarations, they  
12:50:30 12 make mistakes.

12:50:31 13 I would like to point out  
12:50:32 14 one last thing about this. What's  
12:50:36 15 interesting in these declarations is  
12:50:39 16 Christiane Ayotte testified in her  
12:50:44 17 declaration, her original declaration  
12:50:46 18 that everything in the chain of custody  
12:50:48 19 was fine, she could trace the movement  
12:50:53 20 of the bottle just on the documents.

12:50:55 21 Now, we just showed you you  
12:50:57 22 can't trace the movement of the bottle  
12:50:58 23 just on the documents. In response to  
12:51:00 24 our statement you can't trace the  
12:51:02 25 movement of the bottle on the documents

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12:51:06 2 Christiane said she saw the mistakes  
12:51:09 3 but she did not describe them in the  
12:51:11 4 original declaration, but she's  
12:51:13 5 satisfied. In other words, in her  
12:51:15 6 first declaration, if you believe it to  
12:51:17 7 be true, and who knows which one is  
12:51:19 8 true, she's testifying now, oh, she saw  
12:51:22 9 them but did not reveal the mistakes to  
12:51:24 10 the panel, nonetheless saying you could  
12:51:26 11 trace the bottle through the  
12:51:30 12 laboratory. So as we will go through  
12:51:33 13 this that will become more and more  
12:51:37 14 apparent.

12:51:37 15 Let me just go through the  
12:51:41 16 last three slides quickly. One of the  
12:51:47 17 things, there are two pieces that I'd  
12:51:51 18 like to draw your attention to briefly  
12:51:53 19 because again, as I said, this case is  
12:51:55 20 going to come down to a credibility  
12:51:59 21 determination of whose experts you're  
12:52:01 22 going to believe. We very, very  
12:52:03 23 strongly believe that the witnesses  
12:52:05 24 that USADA has put up are not credible  
12:52:08 25 for all the reasons we've talked about.

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12:52:10 2 But one of the reasons --  
12:52:11 3 one of the things you can also look at  
12:52:13 4 is the inconsistency of the test  
12:52:15 5 results here. I think the panel very  
12:52:17 6 well knows they're claiming there are  
12:52:19 7 four other IRMS results that are  
12:52:21 8 positive in the case. However, in  
12:52:24 9 these four other results the T/E was  
12:52:27 10 negative. In other words, they went  
12:52:29 11 back and tested samples that they  
12:52:33 12 originally tested that came out  
12:52:35 13 negative under T/E and then turned out  
12:52:37 14 to be positive under their technique.  
12:52:42 15 Now, these are them right here. 7/13,  
12:52:51 16 7/18, 7/22, 7/23. Now, this alone  
12:53:00 17 should give the panel pause.

12:53:03 18 MR. PAULSSON: You're  
12:53:03 19 looking at Page 137, and what's the  
12:53:06 20 other file reference?

12:53:08 21 MR. SUH: You mean an  
12:53:11 22 exhibit number?

12:53:12 23 MR. PAULSSON: Yes.

12:53:14 24 MR. SUH: There it is. GDC  
12:53:19 25 1363. It shows inconsistent test

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12:53:21 2 results certainly from the T/E to the  
12:53:24 3 IRMS results. And again --

12:53:27 4 MR. RIVKIN: Why is that  
12:53:28 5 inconsistent? Isn't the whole point of  
12:53:30 6 having the two different kinds of tests  
12:53:32 7 that you can play with the T/E ratio by  
12:53:34 8 injecting -- by ingesting some  
12:53:41 9 epitestosterone as well, keep the ratio  
12:53:43 10 down, but then the IRMS results pick up  
12:53:47 11 something that the T/E ratio doesn't  
12:53:50 12 pick up?

12:53:51 13 MR. SUH: Well, I believe  
12:53:52 14 that's addressed below, but if you're  
12:53:54 15 talking about doping with testosterone,  
12:53:56 16 if you recall, the T/E ratios in this  
12:53:59 17 case are in fact low. The T/E ratios  
12:54:04 18 in the case, for example, for stage 17,  
12:54:08 19 let's see, let's take this one, for  
12:54:14 20 example, 47.5 nanograms per milliliter,  
12:54:22 21 that's the T, and the E is 4.4. I mean  
12:54:26 22 these are not -- these are not amounts  
12:54:28 23 you would see with epitestosterone  
12:54:32 24 doping.

12:54:32 25 And frankly, there -- if you

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12:54:34 2 look at all the T/E results, they're  
12:54:36 3 part of the record also, we believe  
12:54:39 4 that they are inconsistent. He is not  
12:54:43 5 a low-mode individual, he's not an  
12:54:46 6 individual who necessarily suppresses  
12:54:53 7 his T to E ratio in low mode.

12:54:56 8 And again, some of these  
12:54:58 9 issues are complicated enough that they  
12:55:00 10 will be addressed by testimony, but  
12:55:03 11 it's important to be aware of them as  
12:55:04 12 we go through this, that they are  
12:55:07 13 inconsistent. And frankly, if you go  
12:55:12 14 through this thing and you look at the  
12:55:14 15 E values, the E values are very --  
12:55:17 16 they're very low.

12:55:18 17 We've seen a lot of  
12:55:25 18 declarations going back and forth about  
12:55:27 19 inconsistent metabolism of testosterone  
12:55:29 20 that we seem to have seen in this case.  
12:55:32 21 We've seen the experts disagree. I  
12:55:35 22 think it would be very instructive to  
12:55:37 23 have John Amory to talk about it. The  
12:55:40 24 patterns that we see in this case are  
12:55:42 25 highly abnormal, not just across

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12:55:45 2 individual diols, but across the  
12:55:47 3 pattern that we see in the entirety of  
12:55:48 4 the case, the entirety of the test  
12:55:50 5 samples. And what you will see is,  
12:55:53 6 frankly, 5-alpha and 5-beta are almost  
12:55:57 7 always positive together for an  
12:56:00 8 abnormal finding. But again, this is  
12:56:02 9 something we're going to hear more  
12:56:04 10 about as the case proceeds.

12:56:07 11 Let me leave you with this  
12:56:09 12 thought, this panel. We well recognize  
12:56:17 13 that there are ISL violations and we  
12:56:19 14 well recognize there's been a debate  
12:56:21 15 about ISL provisions. We think the  
12:56:26 16 interpretations by the witnesses that  
12:56:29 17 USADA put up are wrong. I'd also like  
12:56:32 18 to point out that their witnesses are  
12:56:34 19 in no better position to interpret the  
12:56:36 20 ISL. It's no different than having a  
12:56:38 21 witness come in and opine on what a  
12:56:40 22 statute means. It simply should not be  
12:56:43 23 done and there's frankly no more  
12:56:46 24 expertise to do it than anyone else.

12:56:48 25 When you look at what we see

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12:56:49 2 in the totality of the this case, you  
12:56:51 3 see problems with the method, you see  
12:56:54 4 technicians who are untrained, have  
12:56:56 5 made mistakes, you see abnormal results  
12:56:59 6 and more than anything you see evidence  
12:57:01 7 of very questionable ethics and  
12:57:04 8 tactics. Frankly, you've seen a lot of  
12:57:06 9 evidence of statements that are crafted  
12:57:08 10 to respond to defenses in this case.

12:57:11 11 All of this calls into  
12:57:14 12 question really the integrity of this  
12:57:17 13 system. I mean if it is possible that  
12:57:21 14 a laboratory can do what this  
12:57:24 15 laboratory has done to defend a result  
12:57:26 16 which is incorrect, and they still are  
12:57:30 17 not held to task for it, it does no one  
12:57:33 18 any good. Because there is no  
12:57:36 19 incentive then, none at all to ensure  
12:57:39 20 that they follow the rules and they do  
12:57:41 21 the tests properly.

12:57:42 22 It's no different than -- it  
12:57:46 23 is really no different than the fact  
12:57:47 24 that the rights of persons who are  
12:57:51 25 accused of crimes simply at the end of



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12:57:53 2 the day makes prosecutors and police  
12:57:56 3 officers do their job better and it  
12:57:58 4 protects their rights, and at the end  
12:58:01 5 of the day it supports the integrity of  
12:58:03 6 the system. And I think that's really  
12:58:06 7 ultimately what's at stake here.

12:58:08 8 Because the number of errors  
12:58:09 9 that we see are so comprehensive and so  
12:58:13 10 troubling on so many different levels  
12:58:16 11 and underneath it all is the fact that  
12:58:18 12 in reality, the laboratory made a  
12:58:20 13 terrible mistake with respect to Mr.  
12:58:22 14 Landis and has done him an incredible  
12:58:26 15 disservice. He's innocent of the  
12:58:27 16 allegation, he's innocent and he's  
12:58:31 17 fought past the point that almost  
12:58:33 18 anyone would fight. Past the point of  
12:58:36 19 commonsense and reasoning really to  
12:58:40 20 prove it.

12:58:40 21 And so I would ask the panel  
12:58:42 22 to account for all of that when you  
12:58:44 23 look at the scope of the issues here in  
12:58:47 24 the case.

12:58:47 25 Thank you.

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12:58:49 2 THE PRESIDENT: Thank you  
12:58:50 3 very much. Mr. Young, I think rather  
12:59:09 4 than calling on you we'll take our half  
12:59:11 5 an hour for lunch. It seems a sensible  
12:59:14 6 thing to do. So we'll see you in half  
12:59:16 7 an hour, at 1:30.

12:59:21 8 MR. BARNETT: One procedural  
12:59:22 9 point, is the court's clerk keeping  
12:59:24 10 running time?

12:59:25 11 THE PRESIDENT: Yes, yes.

12:59:37 12 (Lunch recess: 12:59 p.m.)

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1 P R O C E E D I N G S

12:59:37 2 A F T E R N O O N S E S S I O N

13:46:24 3 1:46 p.m.

13:46:24 4 THE PRESIDENT: Good

13:46:26 5 afternoon, Mr. Young. We're ready to

13:46:28 6 hear you, please proceed.

13:46:29 7 MR. YOUNG: Thank you very

13:46:31 8 much. I usually thank the panel at the

13:46:33 9 end of a case like this, but in this

13:46:35 10 case, it's obvious that you've done a

13:46:37 11 lot of careful reading already and so

13:46:39 12 I'd like to thank the panel and I'd

13:46:41 13 like to thank Mr. Rivkin, you and your

13:46:44 14 law firm for your hospitality, and I

13:46:50 15 don't see her here, but I'd

13:46:52 16 particularly like to thank Carmen who

13:46:54 17 was sending us all emails well after

13:46:59 18 midnight.

13:47:00 19 MR. RIVKIN: That's because

13:47:01 20 before midnight she was doing other

13:47:03 21 things for me. Now she's going to have

13:47:06 22 to read that in the transcript.

13:47:08 23 MR. YOUNG: Thank you,

13:47:12 24 Carmen.

13:47:27 25 An introductory comment.

1 P R O C E E D I N G S

13:47:31 2 The IRMS method that we're talking  
13:47:32 3 about is nothing experimental or new.  
13:47:35 4 It's something that has been discussed  
13:47:44 5 in dozens of cases, CAS and other  
13:47:49 6 tribunals. And yet, in spite of all  
13:47:52 7 that, we've already had one nine day  
13:47:56 8 hearing in this case. We've already  
13:47:59 9 had multiple meetings between the  
13:48:02 10 parties and the first panel on the  
13:48:06 11 case. We've had a production of  
13:48:08 12 documents that amounts to some 1500  
13:48:15 13 pages, even though the International  
13:48:20 14 Standard for Laboratories says that the  
13:48:23 15 lab was not supposed to have to produce  
13:48:26 16 any of its SOPs or its ISO compliance  
13:48:30 17 documents.

13:48:32 18 When you read the ISO  
13:48:36 19 scheme, you see that the validity of  
13:48:38 20 the laboratory's methods are to be  
13:48:41 21 audited and accredited by a national  
13:48:45 22 ISO accrediting body, in this case,  
13:48:47 23 COFRAC. What Appellant is trying to do  
13:48:52 24 is to put his experts into the shoes of  
13:48:57 25 that accrediting body so that they get

1 P R O C E E D I N G S

13:49:00 2 to say whether a method is valid or  
13:49:04 3 accredited or not, and it's really a  
13:49:06 4 process of accreditation by litigation,  
13:49:09 5 which is not the way the ISL scheme is  
13:49:13 6 set up.

13:49:33 7 As a result of all of this,  
13:49:35 8 I mean USADA's had to respond to  
13:49:41 9 hundreds of different arguments. Some  
13:49:43 10 were made before the first hearing,  
13:49:44 11 some were made in the press. Most were  
13:49:46 12 gone by the end of the first hearing.  
13:49:49 13 Some have survived.

13:49:50 14 But the picture that gets  
13:49:53 15 painted is that this really isn't just  
13:49:56 16 a case where Mr. Landis is talking  
13:49:58 17 about the results of his sample. This  
13:50:02 18 is a case where Mr. Landis is mounting  
13:50:06 19 a frontal attack on the entire  
13:50:10 20 anti-doping system.

13:50:11 21 In this case, we have a de  
13:50:17 22 novo panel looking at a decision by a  
13:50:24 23 prior panel after nine days of hearing  
13:50:27 24 and an 84 page decision. Historically,  
13:50:32 25 when you look at the CAS de novo rule

1 P R O C E E D I N G S

13:50:37 2 what we saw were cases coming from  
13:50:40 3 international federations where the  
13:50:42 4 facts were sketchy and there were lots  
13:50:45 5 of issues of procedural due process.  
13:50:48 6 And the de novo rule made a lot of  
13:50:50 7 sense because you could cut through all  
13:50:52 8 those due process issues, get right to  
13:50:54 9 the merits and get the case done.

13:50:56 10 That is not what we're  
13:50:57 11 looking at in this case at all. Here  
13:51:03 12 we've had no due process issues below,  
13:51:06 13 we've had extensive factual findings  
13:51:08 14 below in which the issues that are  
13:51:12 15 presented to you today, with two  
13:51:17 16 exceptions, are the very same issues  
13:51:18 17 that were presented to the panel below.  
13:51:20 18 And in fact, if you compare the  
13:51:23 19 proposed findings of fact to the panel  
13:51:26 20 below and the appeal brief, it's a cut  
13:51:29 21 and paste. The only two new issues are  
13:51:31 22 the column issue and the new notion  
13:51:35 23 that this method was not accredited,  
13:51:40 24 which we talked about this morning.

13:51:41 25 What we would suggest is

1 P R O C E E D I N G S

13:51:45 2 that as you're doing your work on this  
13:51:46 3 case and figuring out what issues you  
13:51:50 4 want to focus on, that you pay careful  
13:51:53 5 attention to the lower panel's  
13:51:55 6 decision.

13:52:02 7 THE PRESIDENT: Why do you  
13:52:03 8 say that? I mean we, as you've just  
13:52:09 9 been explaining, it's a de novo hearing  
13:52:12 10 so that the procedural structure we've  
13:52:16 11 been given is a de novo hearing. And  
13:52:20 12 while it may be a matter of interest,  
13:52:22 13 we have to make our own judgment, don't  
13:52:24 14 we?

13:52:26 15 MR. YOUNG: It is a de novo  
13:52:28 16 hearing. The panel, as I understand  
13:52:32 17 Rule 57, is entitled to focus on the  
13:52:34 18 issues that the panel thinks are  
13:52:37 19 important. And in choosing to focus on  
13:52:41 20 those issues I'm simply suggesting that  
13:52:44 21 you can use the rationale and wisdom of  
13:52:50 22 the lower panel as a guide to what  
13:52:52 23 you're going to focus on and what  
13:52:54 24 you're not going to focus on.

13:52:57 25 THE PRESIDENT: Yes, I

1 P R O C E E D I N G S

13:52:58 2 accept that. But it's not for us to  
13:52:59 3 decide whether they were right or  
13:53:01 4 wrong, that's the point.

13:53:03 5 MR. YOUNG: That's correct.

13:53:04 6 You're all familiar with the  
13:53:14 7 series of presumptions that are set  
13:53:17 8 forth in the World Anti-Doping Code and  
13:53:19 9 that are adopted by UCI. The  
13:53:23 10 laboratory is presumed to have followed  
13:53:24 11 the International Standard. The  
13:53:28 12 burden's on the athlete to show that  
13:53:31 13 the standard wasn't followed, and then  
13:53:33 14 if he can show that, then it's back to  
13:53:36 15 the Anti-Doping organization to show  
13:53:38 16 that it did not cause a positive test.

13:53:54 17 What is very important to  
13:53:56 18 focus on in this case, and it's really  
13:53:58 19 a screen for you to use, is that  
13:54:03 20 compliance with an International  
13:54:06 21 Standard as opposed to another  
13:54:09 22 alternative standard or practice shall  
13:54:12 23 be sufficient to conclude that the  
13:54:14 24 procedure covered by the International  
13:54:18 25 Standard was performed properly.



## 1 P R O C E E D I N G S

13:54:19 2 What that means is that it  
13:54:25 3 doesn't matter if Dr. Goldberger or  
13:54:27 4 Dr. Goodman or Dr. Davis says that in  
13:54:31 5 their opinion there was a better way  
13:54:34 6 for LNDD to do something. Under the  
13:54:38 7 rule that applies in this case, the  
13:54:40 8 question is whether what LNDD did  
13:54:44 9 violated the ISL.

13:54:46 10 And in this regard, as  
13:54:49 11 you're listening to different people's  
13:54:52 12 opinions on what the ISL means,  
13:54:58 13 contrast the experience. You will hear  
13:55:05 14 Dr. Goodman, Dr. Goldberger, Dr. Davis  
13:55:07 15 say they have had absolutely no  
13:55:10 16 experience whatsoever with the  
13:55:12 17 International Standard for  
13:55:14 18 Laboratories. On the other side, when  
13:55:18 19 you're listening to opinions you have  
13:55:21 20 Dr. Ayotte who participated on the  
13:55:24 21 laboratory committee that reviewed and  
13:55:26 22 drafted parts of the ISL, and the  
13:55:29 23 opinion of Dr. Schaenzer who operated  
13:55:33 24 the Cologne laboratory under the  
13:55:38 25 jurisdiction of the ISL.

1 P R O C E E D I N G S

13:55:40 2 THE PRESIDENT: Sorry to  
13:55:41 3 bother you here, is that Exhibit 8  
13:55:43 4 still the right reference to find this  
13:55:45 5 document?

13:55:46 6 MR. YOUNG: Yes, this is the  
13:55:48 7 International Standard for Laboratories.

13:55:50 8 THE PRESIDENT: So that  
13:55:51 9 would be your Exhibit 8.

13:55:53 10 MR. YOUNG: Our Exhibit 8,  
13:55:55 11 Page 4 of our Exhibit 8.

13:56:05 12 A quick background not on  
13:56:07 13 the instrumentation of the IRMS test,  
13:56:09 14 but on the process. I know you've done  
13:56:15 15 your homework and so you know that all  
13:56:18 16 living things are made up of carbon  
13:56:21 17 atoms. And within those carbon atoms  
13:56:24 18 about 99 percent have six neutrons and  
13:56:29 19 six protons and so those are called C  
13:56:31 20 12. One percent have seven neutrons  
13:56:36 21 and -- six protons and seven neutrons  
13:56:39 22 and so they're called C 13 and there's  
13:56:45 23 a ratio between those two and those are  
13:56:48 24 called delta values.

13:56:53 25 Different species of plants

## 1 P R O C E E D I N G S

13:56:55 2 have different ratios of C 12 to C 13.  
13:56:57 3 So something like soy, which has fewer  
13:57:09 4 C 13 atoms would be called depleted, C  
13:57:19 5 13 depleted and it would have a more  
13:57:21 6 negative delta value, say minus 29. A  
13:57:29 7 plant like corn, which has a higher  
13:57:31 8 ratio of C 12 to C 13, meaning it has  
13:57:36 9 more C 13 atoms, would be less depleted  
13:57:40 10 and it would have a higher delta value,  
13:57:43 11 say, 24.

13:57:45 12 The way this test works is  
13:57:49 13 you are what you eat and what you eat  
13:57:54 14 ate. So cows that eat corn, cows that  
13:58:00 15 eat soy, etc.

13:58:01 16 All the hormones in your  
13:58:03 17 body all the way down to testosterone  
13:58:06 18 metabolites are a function of what you  
13:58:10 19 ate metabolized down and because of  
13:58:15 20 that they should have approximately the  
13:58:17 21 same delta values.

13:58:18 22 Each one of us may have  
13:58:23 23 different delta values in our bodies  
13:58:25 24 because we have different diets, but  
13:58:27 25 within our bodies they should be

## 1 P R O C E E D I N G S

13:58:29 2 approximately the same.

13:58:30 3 Now, the body produces  
13:58:37 4 steroid metabolites through a number of  
13:58:41 5 different independent pathways. And  
13:58:46 6 the way this test works is that it  
13:58:50 7 finds an endogenous reference compound  
13:58:53 8 in a pathway that would not be affected  
13:58:56 9 by the use of an exogenous steroid like  
13:59:01 10 testosterone, and it finds metabolite  
13:59:08 11 in a pathway that would be affected by  
13:59:10 12 testosterone use. The theory is that  
13:59:15 13 the endogenous reference compound will  
13:59:18 14 be the same whether you're using  
13:59:19 15 steroids or not. If you're using  
13:59:22 16 testosterone the delta value of that  
13:59:24 17 metabolite will be lower, and you  
13:59:28 18 compare the difference between the  
13:59:33 19 lower delta value of the metabolite and  
13:59:35 20 the endogenous reference compound and  
13:59:38 21 that's the delta/delta value that's  
13:59:41 22 used to identify a positive test.

13:59:43 23 The point made by  
13:59:46 24 Dr. Shackelton in his statement was, by  
13:59:50 25 the way, and there's nothing else other

## 1 P R O C E E D I N G S

13:59:52 2 than testosterone or its metabolites  
13:59:56 3 that you can eat or drink that would  
13:59:58 4 cause that ratio to change.

14:00:05 5 Whether somebody gets caught  
14:00:07 6 using the IRMS test has a lot to do  
14:00:09 7 with dose and timing. What gets  
14:00:15 8 measured in your sample that comes out  
14:00:18 9 of your bladder, it's your urine, is  
14:00:20 10 always a mix of what your body is  
14:00:22 11 trying to make naturally, and what is  
14:00:26 12 produced from the exogenous  
14:00:29 13 testosterone.

14:00:30 14 The sooner after a dose, the  
14:00:33 15 larger the dose, the more it's going to  
14:00:36 16 be exogenous testosterone. The longer  
14:00:39 17 after a dose, the smaller the dose, the  
14:00:41 18 more it's going to be mixed and the  
14:00:44 19 tougher it is going to be for this test  
14:00:46 20 to detect it.

14:00:52 21 It also depends on what kind  
14:00:54 22 of testosterone you're taking.  
14:00:56 23 Testosterone injections last a long time.  
14:00:58 24 Oral testosterone is gone between eight  
14:01:01 25 and 20 hours. And creams like

1 P R O C E E D I N G S

14:01:08 2 testosterone gel last a little longer  
14:01:11 3 than oral testosterone.

14:01:12 4 This is a page from the WADA  
14:01:43 5 prohibited list. The purpose of this  
14:01:47 6 page is simply to show that when  
14:01:49 7 reliable methods like IRMS are used,  
14:01:52 8 the laboratory is told to report an  
14:01:55 9 adverse analytical finding.

14:01:57 10 This is the WADA technical  
14:02:06 11 document that describes the positivity  
14:02:10 12 criteria for IRMS. And what it says is  
14:02:16 13 you compare a metabolite like the  
14:02:20 14 androstanediols, 5-alpha diol with an  
14:02:26 15 endogenous reference compound like  
14:02:27 16 pregnanediol, and if there is a  
14:02:30 17 difference greater than three that's  
14:02:34 18 doping.

14:02:50 19 These are the results of Mr.  
14:02:52 20 Landis' stage 17 tour sample. You can  
14:03:00 21 see in the 5-alpha dial/P diol  
14:03:04 22 comparison the difference was more than  
14:03:06 23 three. The difference was more than 6.  
14:03:11 24 This is not a close case. Remember  
14:03:14 25 these numbers when you're listening to

1 P R O C E E D I N G S

14:03:16 2 the arguments about whether this manual  
14:03:22 3 integration or that chromatography  
14:03:26 4 might have made a difference to the  
14:03:28 5 reported delta values. You have to  
14:03:34 6 have a huge difference to turn these  
14:03:36 7 numbers into a negative sample.

14:03:48 8 One other thing on that and  
14:03:49 9 I was struck by the comment in  
14:03:51 10 Dr. Jumeau's declaration. There's this  
14:03:53 11 argument over the linearity of the  
14:03:55 12 instrument and whether it ought to be  
14:04:00 13 measured down to 0.3 per mil or 0.4 per  
14:04:05 14 mil or 0.7 per mil which is what the  
14:04:09 15 LNDD standard operating procedure says.  
14:04:11 16 What she notes is that even if it was  
14:04:14 17 only 0.7 per mil, the effect that that  
14:04:19 18 would have on a particular delta value  
14:04:22 19 would only be 0.35 mils.

14:04:27 20 This is USADA Page 185 and I  
14:04:52 21 show it to you simply to give you a  
14:04:56 22 reference point so that you can find  
14:05:01 23 this key page in the documentation. So  
14:05:10 24 what we're talking about is fraction 3  
14:05:15 25 which is the diols and what we're

1 P R O C E E D I N G S

14:05:21 2 talking about is, here's the athlete's  
14:05:24 3 sample, and here's 5-alpha diol and the  
14:05:29 4 measured value is 27.72. And here's  
14:05:41 5 the PdIol and the measured value is  
14:05:45 6 21.54. And that's where you get the  
14:05:49 7 difference of 6.14.

14:06:02 8 This is Page 175. I'm  
14:06:07 9 sorry, USADA 186. And here is the  
14:06:18 10 difference calculated 6.14 between  
14:06:24 11 those two prior numbers. And then as  
14:06:26 12 you've seen in the briefs, LNDD applies  
14:06:29 13 a measure of uncertainty of 0.8 mils  
14:06:33 14 and so that 0.8 mils is set forth on  
14:06:37 15 either side of the 6.14. So if the  
14:06:47 16 number were to be reduced it's 5.34,  
14:06:50 17 that is still considerably above 3.

14:07:03 18 MR. RIVKIN: Could you go  
14:07:03 19 back to 185 a minute.

14:07:06 20 MR. YOUNG: Sure.

14:07:07 21 MR. RIVKIN: Blank urine is  
14:07:12 22 supposed to be -- is drug free, right?

14:07:16 23 MR. YOUNG: Right.

14:07:18 24 MR. RIVKIN: However that's  
14:07:19 25 determined. Am I reading the fraction



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14:07:21 2 1 correctly. IS, is that -- IS is the  
14:07:30 3 metabolite, right.

14:07:35 4 MR. YOUNG: Where are you?

14:07:37 5 No, the IS is the 5-alpha androstanol  
14:07:44 6 that gets added as an internal  
14:07:46 7 standard. It doesn't come from a  
14:07:49 8 person's urine. That's the internal  
14:07:51 9 standard that gets added for retention  
14:07:54 10 time purposes.

14:07:56 11 So I'll take a step back  
14:07:58 12 there. What you have in the blank  
14:08:02 13 urine is exactly what you have in the  
14:08:05 14 athlete's urine which is two endogenous  
14:08:09 15 reference compounds, Pdiol and 11  
14:08:14 16 ketoetio, and four downstream  
14:08:19 17 metabolites that would be affected by  
14:08:21 18 the use of testosterone. That's the  
14:08:25 19 5-beta diol, the 5-alpha diol,  
14:08:31 20 etiocholanolone and androsterone. So  
14:08:34 21 those six are all the same in the blank  
14:08:37 22 urine and the athlete's urine. But so  
14:08:40 23 they can calculate retention times and  
14:08:42 24 compare, they also add a compound  
14:08:46 25 that's not found in the urine which is

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14:08:48 2 the internal standard, the 5-alpha  
14:08:54 3 androstanol. It's the 5-alpha AC for  
14:08:58 4 the reporter's benefit. Does that  
14:09:00 5 answer the question?

14:09:01 6 MR. RIVKIN: Yes. And the  
14:09:04 7 11 keto is also the standard?

14:09:06 8 MR. YOUNG: No, the 11 keto  
14:09:08 9 is just something that would be in  
14:09:09 10 everybody's urine here.

14:09:20 11 MR. RIVKIN: And I guess  
14:09:22 12 what I'm trying to figure out is why if  
14:09:24 13 you look at the measurements of the  
14:09:27 14 internal standard and the 11 keto you  
14:09:31 15 have the difference of more than 3 up  
14:09:34 16 in fraction F1.

14:09:36 17 MR. YOUNG: Well first of  
14:09:38 18 all, the internal standard is, and that  
14:09:43 19 was the argument we had this morning,  
14:09:45 20 it doesn't come from somebody's urine.  
14:09:49 21 You're not measuring -- let me take a  
14:09:54 22 look at it this way. For this test to  
14:09:58 23 work what you want to measure is  
14:10:00 24 something in somebody's urine naturally  
14:10:03 25 that is not affected by testosterone,

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14:10:07 2 and something in your urine that is  
14:10:14 3 affected by testosterone. So 11 keto  
14:10:16 4 is the endogenous reference compound  
14:10:19 5 and you compare that to the andro and  
14:10:23 6 etio. You don't compare the internal  
14:10:25 7 standard, the delta value of the  
14:10:28 8 internal standard to anything because  
14:10:32 9 it was never in anybody's urine. It is  
14:10:34 10 spiked in there for retention time  
14:10:36 11 purposes. It could have a delta value  
14:10:38 12 of 50 or 20 or whatever it is, and it  
14:10:42 13 doesn't make any difference.

14:10:50 14 MR. SUH: Mr. Chair, I'd  
14:10:52 15 also move to strike the portion of this  
14:10:55 16 opening and the related testimony below  
14:10:57 17 with respect to the linearity argument  
14:11:01 18 raised by Ms. Jumeau. This was not an  
14:11:03 19 argument raised in the brief below.  
14:11:05 20 It's an argument that was raised really  
14:11:07 21 for the first time on declaration.

14:11:09 22 THE PRESIDENT: We'll note  
14:11:10 23 the objection and provisionally allow  
14:11:13 24 Mr. Young to proceed.

14:11:40 25 MR. YOUNG: Let me talk a

1 P R O C E E D I N G S

14:11:41 2 minute about the B sample analysis that  
14:11:45 3 was attended by Mr. Landis' expert,  
14:11:51 4 Dr. de Boer as well as two lawyers.  
14:11:55 5 And when it comes to competently  
14:12:00 6 observing a B sample bottle opening and  
14:12:03 7 analysis, frankly, the lawyers don't  
14:12:05 8 count for much. But Dr. de Boer counts  
14:12:09 9 for a lot. He's a very well known  
14:12:16 10 scientific expert. He was actually the  
14:12:19 11 head of the Lisbon WADA accredited  
14:12:22 12 Anti-Doping Laboratory for some period  
14:12:24 13 of time. He served as an expert in a  
14:12:26 14 number of CAS cases, sometimes  
14:12:28 15 representing athletes. In fact, Dr. de  
14:12:32 16 Boer was the expert witness for the  
14:12:35 17 athlete in the Landaluze case.

14:12:39 18 After watching the analysis of  
14:12:47 19 the B sample for all three days -- well,  
14:12:52 20 first, when he arrived he was given the A  
14:12:59 21 documentation package which you now have.  
14:13:01 22 So he was able to study that. Then,  
14:13:08 23 after watching the analysis of the B  
14:13:12 24 sample for three days this is what he had  
14:13:19 25 to say: First he confirms that he

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14:13:26 2 witnessed for the three days. Then he  
14:13:30 3 makes his statement that "The impression  
14:13:32 4 of the expert regarding the analytical  
14:13:34 5 performance of the B sample analysis was  
14:13:36 6 that the LNDD worked in a transparent and  
14:13:39 7 professional way and according to  
14:13:41 8 transparent and professional procedures."

14:13:46 9 His specific comments on the  
14:13:49 10 IRMS method are found on the next page  
14:13:54 11 where he says "In respect to the  
14:13:57 12 GC/C/IRMS method, it must be stated the  
14:14:01 13 following" and what he says is it was  
14:14:06 14 not possible for him to see the  
14:14:08 15 documentation regarding the 0.8  
14:14:11 16 uncertainty. And it was not possible  
14:14:13 17 for him to see the historical  
14:14:16 18 documentation regarding the blank  
14:14:18 19 urine. So he couldn't do an adequate  
14:14:21 20 evaluation with respect to the  
14:14:24 21 analysis.

14:14:24 22 Now both of those documents  
14:14:27 23 are now, or they were before the last  
14:14:31 24 tribunal and they are now before you.  
14:14:34 25 What is important is what Dr. de Boer

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14:14:54 2 didn't say. He was there for three  
14:15:01 3 days. He was there in the four hour  
14:15:03 4 and 40 minute delay on the afternoon of  
14:15:09 5 the fourth between the analysis of the  
14:15:18 6 first Mix Cal Acetate run and the blank  
14:15:21 7 urine in the athlete's sample. We see  
14:15:24 8 no criticism of that. He was there  
14:15:31 9 watching Claire Frelat perform manual  
14:15:33 10 integration on the B sample. We see no  
14:15:36 11 criticism on that. He was there  
14:15:42 12 watching the sample move from place to  
14:15:45 13 place. He was a visual witness to  
14:15:47 14 chain of custody. He also had the A  
14:15:50 15 bottle documentation package. We see  
14:15:58 16 no criticism of chain of custody. He  
14:16:00 17 was there and saw the controls that the  
14:16:01 18 Paris lab used. We see no criticism of  
14:16:04 19 those controls. He was there and saw  
14:16:08 20 the chromatograms of fraction 3 upon  
14:16:11 21 which the positive test was based. We  
14:16:14 22 see no criticism of those  
14:16:16 23 chromatograms. He was there when the  
14:16:21 24 technician, Claire Frelat, identified  
14:16:28 25 the 5-alpha and Pdiol peaks. We see no

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14:16:31 2 criticism of her peak identification.

14:16:35 3 There's a reason why Dr. de  
14:16:38 4 Boer hasn't been called as a witness in  
14:16:40 5 this case, and you've just heard it.

14:16:47 6 Let me move to COFRAC  
14:16:49 7 accreditation. What you have in the  
14:16:55 8 documents is evidence of an accreditation  
14:17:02 9 report that summarizes an accreditation  
14:17:05 10 audit that took place on February 9th and  
14:17:08 11 10th of 2006. That led to an  
14:17:15 12 accreditation document of May 1 of 2006  
14:17:22 13 and there was a subsequent document  
14:17:23 14 issued in December of 2006 which corrects  
14:17:31 15 the measure of uncertainty for this  
14:17:33 16 method from 20 percent to 0.8 mils or  
14:17:37 17 delta units. That's what the  
14:17:40 18 documentation looks like.

14:17:41 19 Probably the best way to  
14:17:47 20 describe what happened during the  
14:17:51 21 accreditation audit is to look at the  
14:17:53 22 declaration of Corinne Buisson. So in  
14:17:58 23 February, it happens to be February 9  
14:18:00 24 and 10, they were audited for the  
14:18:09 25 purposes of accreditation and extending

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14:18:11 2 the scope of the accreditation to  
14:18:13 3 include IRMS analysis. They did IRMS  
14:18:16 4 analysis before, but it was not on  
14:18:19 5 their list of accredited methods.

14:18:23 6 To do this, the ISO COFRAC  
14:18:27 7 auditor had received the standard  
14:18:31 8 operating procedures for sample  
14:18:33 9 preparation and GC/MS and IRMS analysis  
14:18:40 10 which were attached to the validation  
14:18:42 11 report that he had carefully reviewed  
14:18:46 12 before his arrival and for which he  
14:18:48 13 congratulated us. While he was there  
14:18:53 14 he watched Claire Frelat carry out the  
14:18:56 15 preparation of a sample, you've heard  
14:18:59 16 of that step, the identification of the  
14:19:01 17 analytes by GC/MS and IRMS, that's the  
14:19:06 18 identification issue we've talked  
14:19:08 19 about, and manual integration on the  
14:19:11 20 IRMS. He then went over the ISL,  
14:19:17 21 including all the technical documents  
14:19:20 22 that we'll be talking about today. The  
14:19:23 23 technical document on identification  
14:19:25 24 which is IDCR, the technical document  
14:19:29 25 on positivity criteria in IRMS which is



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14:19:33 2 2004 EAAS, and the technical document  
14:19:37 3 on change of custody.

14:19:40 4 When COFRAC issues an audit  
14:19:45 5 they have an opportunity to note  
14:19:52 6 departures and there are no departures  
14:19:55 7 in the COFRAC audit report that pertain  
14:19:57 8 in any way to the IRMS analysis.

14:20:12 9 What Ms. Buisson said in her  
14:20:14 10 witness statement is corroborated by  
14:20:17 11 Robin Leguy who is the person at COFRAC  
14:20:21 12 in charge of the auditing and  
14:20:26 13 accreditation of medical and biological  
14:20:28 14 laboratories, and what he says is that  
14:20:33 15 LNDD was audited by COFRAC on February  
14:20:36 16 9th and 10th. He confirms that in  
14:20:40 17 advance of that audit COFRAC had  
14:20:42 18 received from LNDD and reviewed all  
14:20:47 19 appropriate information for the  
14:20:48 20 validation of the method EC-31, which  
14:20:52 21 is the IRMS method, including but not  
14:20:57 22 limited to this SOP M-AN-52 and the  
14:21:03 23 uncertainty study establishing  
14:21:05 24 uncertainty at 0.8 mils.

14:21:08 25 Now let me just talk a

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14:21:10 2 second about M-AN-52. Under the method  
14:21:19 3 EC-31 there are various submethods.  
14:21:22 4 One of the submethods has to do with  
14:21:26 5 the mode of operation for the IRMS  
14:21:29 6 method. That's M-AN something that I  
14:21:35 7 don't remember off the top of my head.  
14:21:36 8 Another method is M-AN-52 which has to  
14:21:39 9 do with the mode of operation for the  
14:21:43 10 GC/MS instrument. And what he  
14:21:50 11 basically says -- and the whole point,  
14:21:52 12 the whole accreditation point of Dr.  
14:21:56 13 Goldberger is, aha, when I look at the  
14:21:57 14 accreditation document it lists various  
14:22:00 15 methods but it leaves out M-AN-52.  
14:22:06 16 What Mr. Leguy says is it's of no  
14:22:10 17 consequence that that method isn't  
14:22:12 18 specifically listed. It was reviewed  
14:22:14 19 and this is an important part of the  
14:22:18 20 method, it would not -- the whole EC-31  
14:22:21 21 method would not have been accredited  
14:22:23 22 had the operating procedure set forth  
14:22:25 23 in M-AN-52 not been found completely  
14:22:29 24 satisfactory.

14:22:29 25 Second point: The original

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14:22:36 2 accreditation listed validation at 20  
14:22:39 3 percent. Let me make that -- I said  
14:22:42 4 that wrong. The original accreditation  
14:22:45 5 listed the measure of uncertainty at 20  
14:22:49 6 percent. It turns out that that's the  
14:22:52 7 T/E ratio measure of uncertainty.

14:22:54 8 That was corrected in  
14:23:00 9 December to list the correct measure of  
14:23:05 10 uncertainty which is 0.8 mils which he  
14:23:08 11 said that they had received before, and  
14:23:12 12 that by making that correction there  
14:23:16 13 was an absolute intent that the  
14:23:20 14 effective date of that correction would  
14:23:22 15 be the date of accreditation which is  
14:23:25 16 May 1, 2006.

14:23:39 17 THE PRESIDENT: Just before  
14:23:40 18 we go on, is it suggested anywhere that  
14:23:46 19 the error that we've just been  
14:23:50 20 discussing actually led to any mistakes  
14:23:56 21 or other problems?

14:23:59 22 MR. YOUNG: No. For  
14:24:00 23 example, if you -- let's talk about the  
14:24:05 24 0.8 mils measure of uncertainty. So we  
14:24:09 25 went back to -- well, while Jenny looks

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14:24:32 2 for it I think I can try to describe  
14:24:34 3 it.

14:24:34 4 THE PRESIDENT: As I  
14:24:35 5 understand it, so far anyway, the  
14:24:37 6 significance is that if the accreditation  
14:24:40 7 was invalid that has consequences.

14:24:47 8 MR. YOUNG: That does have  
14:24:49 9 consequences.

14:24:50 10 THE PRESIDENT: Yes, yes.

14:24:56 11 MR. YOUNG: No, it's not  
14:24:57 12 this page, it's the page after that.  
14:25:14 13 So we're talking about uncertainty. So  
14:25:17 14 the measured value of  $\delta/\delta$ , the  
14:25:21 15  $5-\alpha$  minus the  $P_{diol}$  is 6.14. But  
14:25:25 16 the lab applies uncertainty before they  
14:25:29 17 call it positive. They apply an  
14:25:32 18 uncertainty of 0.8 mils. And if you do  
14:25:39 19 that it takes you down to 5.34 and then  
14:25:43 20 you compare that 5.34 to 3 and you see  
14:25:48 21 whether it's positive or not.

14:25:49 22 Well, it is not the way they  
14:25:54 23 validated their method. It is not what  
14:25:57 24 COFRAC meant when they accredited, but  
14:26:02 25 even if you say let's see what happens,

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14:26:06 2 if you would use 20 percent of 6.14  
14:26:10 3 here instead of 0.8, it doesn't make  
14:26:13 4 any difference, the number's still way  
14:26:17 5 over three.

14:26:22 6 MR. RIVKIN: Mr. Young,  
14:26:23 7 could I ask a question of this  
14:26:25 8 statement by Robin Leguy. It appears  
14:26:28 9 to have just been signed last week.  
14:26:31 10 He's not -- I'm trying to figure out  
14:26:33 11 what the evidentiary nature of this  
14:26:35 12 document is. It's -- is he being  
14:26:41 13 presented as a witness here?

14:26:44 14 MR. YOUNG: Yes. Let me  
14:26:45 15 tell you the background on this. The  
14:26:48 16 first time in all of the hundreds and  
14:26:53 17 hundreds and hundreds of pages of  
14:26:56 18 documents submitted by Mr. Landis that  
14:26:59 19 they ever claimed that this method,  
14:27:07 20 EC-31, was not accredited, was in the  
14:27:09 21 witness statement of Dr. Goldberger.  
14:27:12 22 And so in response to that, we got that  
14:27:19 23 at midnight on a Friday night, not  
14:27:23 24 knowing whether this panel would let  
14:27:25 25 that evidence in or not, we scrambled

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14:27:28 2 to talk to COFRAC. We didn't know this  
14:27:31 3 was an issue. Frankly, we're shocked  
14:27:35 4 that this is an issue. We scrambled to  
14:27:37 5 talk to COFRAC to talk to the guy who's  
14:27:39 6 in charge of the accreditation to get  
14:27:42 7 this statement from him and that is the  
14:27:44 8 nature of this statement.

14:27:47 9 MR. SUH: Mr. Chair, I would  
14:27:49 10 turn the panel's attention to the cross  
14:27:51 11 examination of Christiane Ayotte. We  
14:27:54 12 cross examined Ms. Ayotte on the issue  
14:27:56 13 of the 20 percent which is why we have  
14:27:57 14 a December cleanup document. It is not  
14:27:59 15 true that there has been -- this is the  
14:28:01 16 first time accreditation has been an  
14:28:03 17 issue and there's a record of it.

14:28:06 18 MR. BARNETT: Then they  
14:28:06 19 should have raised it in their brief  
14:28:09 20 instead of in Dr. Goldberger's  
14:28:10 21 testimony.

14:28:11 22 MR. SUH: That's a different  
14:28:12 23 statement than saying it has never been  
14:28:14 24 raised before.

14:28:15 25 THE PRESIDENT: Excuse me,

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14:28:16 2 may I make a statement. It's not  
14:28:18 3 helpful to have any interruptions to  
14:28:21 4 opening addresses. Mr. Suh, you saw  
14:28:24 5 that yours wasn't interrupted. There's  
14:28:26 6 times for you to make these critiques  
14:28:28 7 and you'll be given every opportunity  
14:28:30 8 to do that. I don't want to start  
14:28:32 9 inter-counsel dialogue in the middle of  
14:28:35 10 an opening statement. So I'd just be  
14:28:37 11 obliged if you reserve your comments.

14:28:39 12 MR. SUH: Thank you, Mr.  
14:28:41 13 Chair.

14:28:41 14 MR. YOUNG: When you read  
14:28:42 15 the witness statements of Mr. Landis'  
14:28:45 16 experts, you see lots of statements  
14:28:46 17 that the methods don't comply with the  
14:28:51 18 ISL and the various technical  
14:28:53 19 documents.

14:28:54 20 Here's what COFRAC had to  
14:28:57 21 say about that. Go to the top first.  
14:29:07 22 This is from the assessor's report and  
14:29:13 23 it is other comments and findings of  
14:29:15 24 the assessor. "The purpose of these  
14:29:20 25 two days of assessment was to verify on

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14:29:22 2 site whether the measures taken by the  
14:29:24 3 laboratory to ensure the quality of the  
14:29:26 4 activities covered by its scope of  
14:29:28 5 accreditation are technically valid,  
14:29:34 6 suited to the activities performed,  
14:29:38 7 compliant with COFRAC requirements and  
14:29:44 8 whether the said measures have been  
14:29:46 9 effectively and efficiently applied.

14:29:52 10 "The assessment was  
14:29:53 11 conducted in accordance with ISO 17025  
14:29:57 12 standard, but also in accordance with  
14:30:00 13 the ISL reference framework of the  
14:30:06 14 World Anti-Doping Agency."

14:30:09 15 You know this is about,  
14:30:10 16 includes the IRMS method because  
14:30:13 17 there's a specific reference that  
14:30:15 18 staffing for IRMS has been increased.  
14:30:26 19 And the conclusion is "To conclude, the  
14:30:33 20 assessors have confidence in the  
14:30:35 21 laboratory's technical and  
14:30:36 22 organizational ability to perform the  
14:30:38 23 activities covered by its annual scope  
14:30:40 24 of accreditation, and issue a  
14:30:43 25 favourable opinion regarding the



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14:30:45 2 applications for extension."

14:30:51 3 Lest anyone has any question

14:30:58 4 that the very documents that we're

14:31:05 5 talking about today, the technical

14:31:06 6 documents, were or were not reviewed as

14:31:08 7 part of the accreditation assessment,

14:31:11 8 here are other technical comments and

14:31:13 9 findings from the assessor. "The TA,"

14:31:18 10 the technical assessor, "paid

14:31:21 11 particular attention to compliance of

14:31:24 12 the measures taken by LNDD having

14:31:27 13 regard for the WADA reference

14:31:31 14 framework, based particularly on the

14:31:32 15 following documents."

14:31:37 16 The first one, International

14:31:41 17 Standard for Laboratories. Second one,

14:31:42 18 prohibited list. Third one, TDIDCR,

14:31:47 19 that's the technical document on how

14:31:48 20 you identify peaks. Next one, TDEAAS.

14:31:55 21 That's the positivity criteria for

14:32:02 22 IRMS. Next one, TD2003LCOC. That's

14:32:06 23 the chain of custody document we're

14:32:07 24 talking about.

14:32:08 25 So if having looked at those

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14:32:19 2 documents the COFRAC assessor would  
14:32:21 3 have found anything wrong with LNDD's  
14:32:27 4 method -- we're not talking about what  
14:32:30 5 happens in a particular page in a  
14:32:31 6 particular case, I'll grant that. But  
14:32:33 7 what we're talking about is the general  
14:32:35 8 method that they use to document chain  
14:32:38 9 of custody. What we're talking about  
14:32:40 10 is the general method that they use to  
14:32:42 11 identify peaks. What we're talking  
14:32:44 12 about is general methods like the  
14:32:47 13 controls that they use. Then a  
14:32:52 14 deficiency report would have been  
14:32:53 15 issued. And there was none.

14:32:54 16 Let me speak for a minute  
14:33:12 17 very generally about Appellant's  
14:33:15 18 defenses and then I'll deal with a  
14:33:17 19 couple of them specifically.

14:33:18 20 I guess the best analogy  
14:33:20 21 would be like his defenses are like the  
14:33:25 22 mirages that you see in the desert.  
14:33:28 23 When you first see it it looks pretty  
14:33:29 24 good and you think that it might be the  
14:33:31 25 real thing, but as you get closer to it

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14:33:37 2 you see that it isn't the real thing  
14:33:39 3 and then it disappears. This was the  
14:33:46 4 case with a whole bunch of defenses  
14:33:48 5 they raised in the press and before the  
14:33:49 6 first hearing. It's what happened at  
14:33:51 7 the hearing when the panel came to  
14:33:53 8 fully understand the different  
14:33:56 9 arguments that they were making.  
14:34:00 10 Frankly, I think the panel does a  
14:34:02 11 better job dealing with each of those  
14:34:06 12 defenses than I could standing here  
14:34:12 13 before you and we don't have time  
14:34:13 14 anyhow, so what I'll do is just talk  
14:34:17 15 about some of those defenses,  
14:34:20 16 emphasizing a more global perspective.

14:34:23 17 The first one I want to talk  
14:34:27 18 about is a new one, and that's the  
14:34:30 19 different column defense so as you look  
14:34:36 20 through --

14:34:37 21 MR. RIVKIN: Sorry, before  
14:34:37 22 you move into these areas, just to  
14:34:39 23 finish up on the COFRAC accreditation,  
14:34:43 24 first of all, do you agree that the  
14:34:46 25 standard for us to apply is the one

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14:34:48 2 that was set out in the Tyler Hamilton  
14:34:50 3 case which is that if the method has  
14:34:53 4 been accredited then the lab's work is  
14:34:58 5 to be accorded the presumption of  
14:35:01 6 either the WADA code, but if the method  
14:35:04 7 has not been accredited then it's the  
14:35:07 8 lab's burden to show that it's  
14:35:08 9 complying with International Standards?

14:35:13 10 MR. YOUNG: Right. And then  
14:35:14 11 there are other cases that show that  
14:35:16 12 too.

14:35:16 13 MR. RIVKIN: Right. And is  
14:35:18 14 it your argument that the particular  
14:35:22 15 method used here was accredited based  
14:35:24 16 on the documents that you've just shown  
14:35:26 17 us?

14:35:27 18 MR. YOUNG: Oh, absolutely.  
14:35:28 19 Yes. I mean there are exhibits, I've  
14:35:30 20 given you two translated pages from  
14:35:34 21 many documents in the exhibits, but it  
14:35:39 22 is absolutely our position that LNDD's  
14:35:44 23 IRMS method is accredited, absolutely.

14:35:51 24 MR. RIVKIN: Even though the  
14:35:52 25 accreditation document doesn't list

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14:35:55 2 M-AN-52 specifically?

14:35:56 3 MR. YOUNG: Correct. Because  
14:35:57 4 it lists the method EC-31, which is the  
14:36:00 5 entire method.

14:36:00 6 Quickly, on this whole  
14:36:15 7 column issue --

14:36:16 8 THE PRESIDENT: Forgive me,  
14:36:18 9 I'm being a nuisance, but you say the  
14:36:21 10 accreditation was valid because it  
14:36:23 11 lists EC-31 which encompasses the  
14:36:28 12 missing notation of 52, right?

14:36:32 13 MR. YOUNG: Right.

14:36:34 14 THE PRESIDENT: And putting  
14:36:38 15 it in simple terms, you say that the  
14:36:40 16 COFRAC omission of a reference to 52  
14:36:44 17 was an administrative oversight; is  
14:36:46 18 that it?

14:36:47 19 MR. YOUNG: Correct. And as  
14:36:50 20 Mr. Leguy says, look, we accredited the  
14:36:55 21 overall method. We don't need to  
14:37:03 22 mention every single submethod for that  
14:37:06 23 accreditation of the overall method to  
14:37:09 24 be valid. You couldn't. It would make  
14:37:14 25 no sense, quite frankly, to accredit

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14:37:18 2 the overall -- take a step back.  
14:37:21 3 You've got two instruments in this  
14:37:22 4 method. You've got the GC/MS  
14:37:25 5 instrument and you've got the IRMS  
14:37:27 6 instrument. It would make no sense to  
14:37:30 7 -- and they've got to work together.  
14:37:33 8 It would make no sense to accredit the  
14:37:36 9 overall method and yet not accredit one  
14:37:39 10 of the two instruments. That's in  
14:37:43 11 essence what Mr. Leguy is saying. And  
14:37:46 12 the fact is that the method was  
14:37:50 13 accredited.

14:37:52 14 There are lots of standard  
14:37:53 15 operating procedures that are part of  
14:37:57 16 the method EC-31 that aren't listed in  
14:38:02 17 the accreditation document either.  
14:38:09 18 They're all subparts of the method.

14:38:11 19 Ready to go on to column?

14:38:18 20 THE PRESIDENT: Yes, I just  
14:38:19 21 wanted to be clear I understood what  
14:38:21 22 your argument was and I do understand  
14:38:22 23 it.

14:38:23 24 MR. YOUNG: Thank you. So  
14:38:24 25 the story very briefly on column is

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14:38:27 2 this. That a service engineer, Le  
14:38:32 3 Petit, comes in to service the  
14:38:33 4 instrument. He brings with him his own  
14:38:37 5 column. He puts his column in the  
14:38:39 6 instrument to do his service work. At  
14:38:46 7 the time he changes the name of the  
14:38:51 8 column in instrument method file to his  
14:38:53 9 own column. He does his work, he takes  
14:38:58 10 his column with him. LNDD puts their  
14:39:03 11 column, the correct column that they  
14:39:05 12 use back in and everybody's happy ever  
14:39:12 13 after. Nobody -- and the name of the  
14:39:18 14 instrument is not changed in the method  
14:39:21 15 file.

14:39:25 16 THE PRESIDENT: You mean  
14:39:26 17 changed back?

14:39:27 18 MR. YOUNG: It's not changed  
14:39:28 19 back. It's not changed back. And so  
14:39:31 20 nobody notices at LNDD. Nobody on  
14:39:38 21 Landis' team notices it through the  
14:39:40 22 whole first trial, and then after the  
14:39:44 23 trial they notice that the name in the  
14:39:48 24 method file for the GC/MS instrument in  
14:39:54 25 this particular method has been changed

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14:39:56 2 to something different than what it  
14:39:57 3 should be. And so they point that out  
14:40:01 4 and we respond by saying, yes, that's  
14:40:07 5 right. It's got the wrong name, but in  
14:40:09 6 fact the right column was used, and in  
14:40:15 7 terms of the operation of the  
14:40:16 8 instrument it didn't matter what name  
14:40:17 9 is there. Certainly they could be  
14:40:21 10 confused, they could have called and  
14:40:24 11 found out rather than file an appeal,  
14:40:27 12 but at the end of the day, it has  
14:40:30 13 absolutely no substance on the effect  
14:40:34 14 of the instrument or whether the sample  
14:40:37 15 was positive or not.

14:40:39 16 The reality is that there  
14:40:40 17 was the same column in the GC/MS  
14:40:43 18 instrument and the IRMS instrument at  
14:40:46 19 the time Mr. Landis' sample was  
14:40:48 20 analyzed.

14:40:49 21 MR. PAULSSON: And we know  
14:40:50 22 that how?

14:40:51 23 MR. YOUNG: You know that  
14:40:52 24 because of a number of things. You  
14:40:55 25 know that because of the declarations



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14:41:02 2 of the LNDD witnesses who say that this  
14:41:05 3 is what happened. You know that  
14:41:08 4 because of the declaration of Le Petit  
14:41:14 5 who say this is what happened. You  
14:41:17 6 know that because of the declarations  
14:41:19 7 of the LNDD witnesses who say we've  
14:41:22 8 never had that kind of column in our  
14:41:26 9 laboratory. And you know that because  
14:41:29 10 of the declaration of Dr. Brenna who  
14:41:34 11 tried an experiment using the two  
14:41:37 12 different columns and he could tell  
14:41:41 13 from that experiment that it had to be  
14:41:45 14 the correct column in both instruments.  
14:41:49 15 That's how.

14:41:50 16 THE PRESIDENT: Could I just  
14:41:51 17 ask this, which may reveal my ignorance  
14:41:54 18 of testing procedures. Was it right  
14:41:56 19 for Le Petit to change the entry when  
14:42:01 20 he was doing his maintenance work?

14:42:04 21 MR. YOUNG: Yes.

14:42:04 22 THE PRESIDENT: It was  
14:42:05 23 right?

14:42:06 24 MR. YOUNG: Absolutely.

14:42:07 25 THE PRESIDENT: So what he

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14:42:08 2 got wrong according to you was he made  
14:42:10 3 the entry but he didn't change it when  
14:42:12 4 he left; is that it?

14:42:14 5 MR. YOUNG: Yes. And either  
14:42:15 6 he got it wrong or LNDD got it wrong.  
14:42:18 7 When' he took his column out either he  
14:42:21 8 should have changed it or when LNDD put  
14:42:26 9 the correct column -- the column they  
14:42:28 10 always use back in, they should have  
14:42:30 11 changed it. But it didn't happen, so  
14:42:34 12 it lived on as -- it lived on as an  
14:42:41 13 incorrect statement in the documents  
14:42:43 14 until somebody pointed it out.

14:42:47 15 MR. PAULSSON: The last in  
14:42:48 16 your series of answers to that question  
14:42:51 17 having to do with the Brenna testimony,  
14:42:53 18 I assume that we're likely to get back  
14:42:56 19 to that in the course of the hearings?

14:43:00 20 MR. YOUNG: Yes, we'll ask  
14:43:02 21 Dr. Brenna about that.

14:43:03 22 Let me talk briefly about  
14:43:09 23 controls. Question: Do the controls  
14:43:16 24 that were used by LNDD violate the  
14:43:20 25 International Standard for Laboratories?

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14:43:23 2 The answer to that would be no. And it  
14:43:27 3 would be no for several reasons. First,  
14:43:31 4 if LNDD had been using the wrong types of  
14:43:35 5 controls then COFRAC would have noted  
14:43:41 6 that as a departure when they accredited  
14:43:44 7 the method.

14:43:45 8 Secondly, you've seen  
14:43:50 9 statements from Dr. Ayotte and Dr.  
14:43:53 10 Schaenzer that in their opinions the  
14:43:55 11 controls satisfied the International  
14:44:03 12 Standard for Laboratories.

14:44:04 13 And finally, you've seen  
14:44:05 14 opinions, whether or not we're dealing  
14:44:06 15 with the International Standard for  
14:44:08 16 Laboratories, from Dr. Matthews, Dr.  
14:44:12 17 Brenna, Dr. Jumeau, all saying that  
14:44:15 18 these controls work perfectly fine to  
14:44:19 19 establish that the instrument is  
14:44:21 20 operating properly.

14:44:23 21 Mr. Suh showed you this,  
14:44:40 22 it's the sequence chart. We've got  
14:44:43 23 three stability controls. We've got a  
14:44:47 24 Mix Cal IRMS where they run the same  
14:44:48 25 thing three times to make sure they get

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14:44:52 2 the same results. You've got a Mix Cal  
14:44:55 3 Acetate here at step 7. And you've got  
14:44:57 4 a Mix Cal Acetate here at step 4, from  
14:45:00 5 the same vial, with the athlete's  
14:45:03 6 sample and the blank urine in between.

14:45:06 7 MR. RIVKIN: Just for the  
14:45:07 8 record, you're pointing to Exhibit 24,  
14:45:10 9 USADA 0155.

14:45:12 10 MR. YOUNG: Yes, I am.  
14:45:13 11 Thank you.

14:45:14 12 So as Mr. Suh said, this is  
14:45:17 13 a certified reference standard.  
14:45:21 14 There's a company called Eurofins that  
14:45:23 15 tells you that this is the exact delta  
14:45:26 16 value of everything that's in that  
14:45:28 17 control. And so the question is when  
14:45:33 18 they run this control here and here, do  
14:45:41 19 you get the delta value that you would  
14:45:46 20 expect.

14:45:47 21 Hard to read, sorry. The  
14:46:11 22 criteria that LNDD applies when it  
14:46:13 23 analyzes this Mix Cal Acetate as a  
14:46:16 24 control is that three out of the four  
14:46:21 25 different substances analyzed must be

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14:46:26 2 within 0.5 delta units of the validated  
14:46:34 3 number. This is the validated number.  
14:46:38 4 It's not just, as Mr. Suh suggested, if  
14:46:41 5 anything is ever out of 0.5 it doesn't  
14:46:51 6 meet criteria. This is a three out of  
14:46:53 7 four criteria. And in fact, when they  
14:46:55 8 ran the Mix Cal Acetate the first time  
14:46:58 9 and the second time in sample A, all  
14:47:01 10 four were within 0.5. So they not only  
14:47:06 11 met the three out of four, they met all  
14:47:08 12 four.

14:47:11 13 MR. RIVKIN: Can I ask you a  
14:47:12 14 question about that?

14:47:13 15 MR. YOUNG: Sure.

14:47:14 16 MR. RIVKIN: Why is it that  
14:47:15 17 in order to validate you only need to  
14:47:17 18 find -- have three out of four within  
14:47:18 19 the standard but it's a positive test  
14:47:22 20 if one out of the four is out of the  
14:47:26 21 range?

14:47:27 22 MR. YOUNG: Fair question.  
14:47:28 23 The way they validated their method was  
14:47:30 24 using the three out of four. To do  
14:47:34 25 this it's a single measurement. A

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14:47:37 2 little bit apples to apples. When  
14:47:39 3 you're looking at the delta/delta  
14:47:44 4 value, for one thing it's comparing two  
14:47:46 5 things. It's two measurements. And  
14:47:49 6 for another thing, the measure of  
14:47:51 7 uncertainty is not 0.5, it's 0.8. And,  
14:47:56 8 that's the way WADA wrote the criteria.

14:47:59 9 Next one. Again, this is  
14:48:13 10 the B sample, it was injected at  
14:48:17 11 injection Mix Cal Acetate, injected in  
14:48:20 12 injection 9, injection 16. Theoretical  
14:48:24 13 values, all within 0.5. Look at one  
14:48:30 14 you're familiar with, which is the  
14:48:32 15 5-beta diol. Theoretical value is  
14:48:39 16 33.81. And it's within .2 delta units  
14:48:47 17 for both of the times that it was run  
14:48:49 18 in this standard 33.81 to 33.63 and  
14:48:56 19 33.77.

14:48:59 20 I'll talk about another  
14:49:00 21 control, which is the blank urine.  
14:49:13 22 Remember that Dr. de Boer said that one  
14:49:17 23 of the things that he didn't have was  
14:49:20 24 the history of the blank urine that was  
14:49:23 25 used as a control for this sample.

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14:49:29 2 Well this is that history. The name of  
14:49:31 3 that control is blank urine number 4.  
14:49:36 4 What you see is that in December of  
14:49:40 5 2005 Cynthia Mongongu ran that blank  
14:49:46 6 urine control three different times.  
14:49:50 7 And the mean of those three different  
14:49:53 8 times came up with a delta value for  
14:49:57 9 5-alpha of 22.77 and Pdiol of 21.09.  
14:50:04 10 Which gave you a delta/delta difference  
14:50:10 11 of 1.69.

14:50:17 12 So in the future when we're  
14:50:19 13 running that blank urine as a control  
14:50:20 14 to see whether the instrument is  
14:50:26 15 measuring properly in a urine matrix,  
14:50:28 16 that 1.69 is the number we're looking  
14:50:34 17 for.

14:50:35 18 Go to the top. This is a  
14:50:38 19 chart of the 43 different times that  
14:50:42 20 this same blank urine pool was run  
14:50:46 21 between June and August of 2006. The  
14:50:53 22 mean of all those times -- remember,  
14:50:55 23 the target that we're looking for was  
14:50:57 24 1.69. The mean of these 43 was 1.70.

14:51:06 25 When this blank urine was

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14:51:07 2 run in connection with Mr. Landis'  
14:51:14 3 urine, the value, remember 1.69 is our  
14:51:23 4 target, I think the correct number  
14:51:25 5 there is 1.59. It's 1.59 or 69, I just  
14:51:31 6 can't read it on this with my eyes.  
14:51:33 7 It's either right on or within a tenth.  
14:51:36 8 And for his B sample it was 1.60 which  
14:51:40 9 is less than a tenth off.

14:51:43 10 So what that tells you is  
14:51:47 11 this blank urine is very consistent and  
14:51:52 12 that the instrument is working properly  
14:51:55 13 in a urine matrix when Mr. Landis'  
14:52:00 14 sample is being analyzed because you  
14:52:02 15 get the identical result.

14:52:04 16 Dr. Brenna makes an  
14:52:08 17 interesting point about the blank urine  
14:52:12 18 and that's drawing the distinction  
14:52:15 19 between the blank urine in a case like  
14:52:17 20 this and let's say a stanozolol case.  
14:52:25 21 Because if this was a stanozolol case  
14:52:28 22 and you took a blank urine it wouldn't  
14:52:29 23 have any stanozolol in it at all.  
14:52:32 24 That's what a blank urine is. And then  
14:52:34 25 you'd take another sample and you'd



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14:52:37 2 spike it with stanozolol and that would  
14:52:39 3 be your positive control and now you  
14:52:42 4 know what a sample looks like with  
14:52:44 5 stanozolol.

14:52:45 6 In this case, both the blank  
14:52:47 7 urine and the athlete's urine and the  
14:52:51 8 urine of everybody in this room,  
14:52:52 9 because it's live urine, is going to  
14:52:55 10 have every single metabolite that we're  
14:52:58 11 looking at in this case. It's going to  
14:53:00 12 have PdIol. It's going to have  
14:53:03 13 5-alpha. It's going to have 5-beta.  
14:53:05 14 And so what this does, it establishes  
14:53:07 15 that you can identify those compounds  
14:53:12 16 in a urine matrix.

14:53:13 17 Chain of custody: Question  
14:53:34 18 number 1 as in every one of these  
14:53:36 19 topics, does the chain of custody  
14:53:39 20 method used by LNDD violate the  
14:53:41 21 International Standard of Laboratories  
14:53:43 22 in all the different respects that Dr.  
14:53:47 23 Goldberger argues. The answer is no.

14:53:55 24 First reason the answer is  
14:53:56 25 no is that the laboratory was assessed

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14:53:58 2 by COFRAC against the chain of custody  
14:54:01 3 document in the ISL. If there would  
14:54:04 4 have been a problem with the method,  
14:54:06 5 like in every movement of the sample  
14:54:13 6 you not only have to show where it  
14:54:15 7 ended up, but where it started, and  
14:54:18 8 then the next time you have to show  
14:54:20 9 where it started and where it ended up.  
14:54:24 10 If that was a requirement of the ISL,  
14:54:27 11 COFRAC would have said you have a  
14:54:29 12 departure.

14:54:35 13 Second, you have the opinion  
14:54:36 14 of Dr. Ayotte, who again, much more so  
14:54:39 15 than Dr. Goldberger, actually works  
14:54:42 16 under the ISL.

14:54:43 17 But let's step back and take  
14:54:49 18 a big picture look at what chain of  
14:54:50 19 custody is all about, because at the  
14:54:52 20 end of the day you're going to have to  
14:54:55 21 decide was the ISL violated and if it  
14:54:58 22 was, did it make any difference in this  
14:55:00 23 case to cause the positive sample.

14:55:03 24 What you're looking for in  
14:55:05 25 chain of custody is, first, is there a

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14:55:08 2 mix-up in the identity of the athlete's  
14:55:11 3 sample, and second, has there been  
14:55:14 4 tampering with the sample.

14:55:15 5 So let's talk about identity  
14:55:19 6 first. The question of whether this  
14:55:29 7 sample was -- the sample that was  
14:55:32 8 analyzed is either Mr. Landis' or  
14:55:36 9 somebody else's is not an issue in the  
14:55:39 10 case. That was admitted by Mr. Suh in  
14:55:44 11 his closing statement.

14:55:45 12 Let's talk about tampering.  
14:55:58 13 So question: Were either the A or B  
14:56:04 14 bottles tampered with? Well, we know  
14:56:10 15 the B bottle wasn't tampered with  
14:56:13 16 because Dr. de Boer was there watching  
14:56:15 17 it. So then was the A bottle tampered  
14:56:18 18 with, well, if it was isn't it  
14:56:19 19 remarkable that you'd get the identical  
14:56:21 20 results in the A bottle that you got in  
14:56:23 21 the B bottle.

14:56:25 22 And how is it that the  
14:56:32 23 bottle was tampered with when the  
14:56:34 24 statements of all the witnesses are  
14:56:36 25 clear that neither of these bottles,

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14:56:41 2 with one exception, ever left the  
14:56:45 3 controlled zone of the laboratory. The  
14:56:49 4 one exception is when the B bottle was  
14:56:51 5 taken out and paraded around the  
14:56:53 6 witnesses so that they could observe  
14:56:54 7 that it was sealed. Otherwise, these  
14:56:56 8 bottles stayed within the controlled  
14:56:58 9 area of the laboratory.

14:57:05 10 So if you're going to have  
14:57:07 11 tampering, the only tampering that  
14:57:08 12 could take place is within the  
14:57:10 13 controlled area, the only person that  
14:57:12 14 could be within the controlled area is  
14:57:13 15 one of the authorized laboratory  
14:57:16 16 technicians because the controlled area  
14:57:18 17 is defined in the ISL. And so what  
14:57:22 18 you'd have to have is one of the  
14:57:23 19 laboratory technicians tampering with  
14:57:26 20 the A bottle. And that has not been  
14:57:30 21 alleged in this case.

14:57:33 22 And if that is what the  
14:57:34 23 whole chain of custody issue is there  
14:57:36 24 to protect against, then it didn't make  
14:57:40 25 any difference because if a laboratory

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14:57:44 2 person was going to tamper with the  
14:57:47 3 bottle, they could take it out of the  
14:57:49 4 refrigerator, tamper with it, put it  
14:57:53 5 back in, they certainly aren't going to  
14:57:54 6 document it. It's not going to show up  
14:57:56 7 as a chain of custody document either  
14:58:01 8 way, whether you have Dr. Goldberger's  
14:58:04 9 A to B, B to C, C to D approach to  
14:58:07 10 chain of custody, or whether you have  
14:58:09 11 the method that's used by LNDD, either  
14:58:14 12 way, you wouldn't address internal  
14:58:16 13 tampering. What you would do is  
14:58:18 14 address the issue whether the sample  
14:58:21 15 ever got outside the lab where somebody  
14:58:24 16 else could deal with it, and in this  
14:58:27 17 case that's not an issue.

14:58:31 18 MR. RIVKIN: Mr. Young,  
14:58:32 19 sorry to interrupt you again. But  
14:58:33 20 doesn't that prove too much? We were  
14:58:35 21 looking at the ISL standard before  
14:58:37 22 which says that intra-laboratory  
14:58:40 23 transfers have to be documented. And  
14:58:43 24 you'll agree that's the standard.

14:58:45 25 MR. YOUNG: I'll take you

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14:58:46 2 through that in a minute.

14:58:48 3 MR. RIVKIN: Okay. But if  
14:58:49 4 that's the standard, then to say that  
14:58:53 5 the -- as long as the sample is within  
14:58:57 6 the controlled zone of the laboratory  
14:59:00 7 everything is fine it seems to me  
14:59:03 8 proves too much. Because every  
14:59:05 9 laboratory is a controlled zone, and  
14:59:09 10 therefore, to say -- and so if that was  
14:59:15 11 all you needed to show then the  
14:59:17 12 standard that you need to document  
14:59:20 13 transfers within that controlled zone  
14:59:22 14 would seem to me to be unnecessary.

14:59:25 15 MR. YOUNG: If it was true  
14:59:26 16 that every laboratory was a controlled  
14:59:29 17 zone and that in every laboratory a  
14:59:33 18 sample never left the controlled zone,  
14:59:38 19 you'd be right. But that isn't true.  
14:59:42 20 Within the different laboratories they  
14:59:45 21 have controlled zones on the first  
14:59:47 22 floor. I know the laboratories. They  
14:59:50 23 have controlled zones on the first  
14:59:51 24 floor. You have to take it out of the  
14:59:53 25 controlled zone into another controlled

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14:59:54 2 zone, for example. And so I don't know  
14:59:59 3 that the Paris lab is the only lab that  
15:00:03 4 is this way, there may be others, but  
15:00:07 5 it is entirely conceivable when you're  
15:00:09 6 writing a rule like this that you have  
15:00:11 7 to deal with situations where samples  
15:00:15 8 move between controlled areas and  
15:00:18 9 noncontrolled areas.

15:00:21 10 So if you are not going to  
15:00:22 11 have it in your possession, you better  
15:00:25 12 document that it's in a controlled  
15:00:28 13 area. That need goes way down when it  
15:00:37 14 never leaves the controlled area in the  
15:00:38 15 first place.

15:00:39 16 This is what the ISL says  
15:00:53 17 about laboratory chain of custody:  
15:01:00 18 "Internal chain of custody procedures  
15:01:02 19 to maintain control of and  
15:01:03 20 accountability for samples from receipt  
15:01:05 21 through final disposition of the  
15:01:07 22 samples. The procedures must  
15:01:08 23 incorporate the concepts presented in  
15:01:12 24 the WADA technical document." So as  
15:01:17 25 you're looking at this, ask yourself

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15:01:21 2 not whether you have literal compliance  
15:01:24 3 in what LNDD does, but whether you have  
15:01:28 4 the concepts incorporated.

15:01:53 5 This is the WADA technical  
15:01:55 6 document on chain of custody. First  
15:01:59 7 when we're talking about concepts, as  
15:02:01 8 you go through this you'll see some  
15:02:03 9 places where it says must, other places  
15:02:05 10 where it says should. But let me just  
15:02:09 11 piece-part it instead of just giving  
15:02:13 12 you, as Mr. Suh did, special sections,  
15:02:15 13 I'm going to let you read the whole  
15:02:17 14 thing and you'll see the context.

15:02:20 15 First, "The laboratory  
15:02:23 16 internal chain of custody is  
15:02:24 17 documentation (worksheets, logbooks,  
15:02:29 18 forms, etc.) that records the movement  
15:02:31 19 of samples and sample aliquots during  
15:02:34 20 analysis. A laboratory internal chain  
15:02:36 21 of custody does not require a separate  
15:02:39 22 form."

15:02:41 23 Well that's a good thing  
15:02:42 24 because contrary to Dr. Goldberger's  
15:02:45 25 suggestion, LNDD does use working



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15:02:51 2 logbooks and worksheets for their  
15:02:54 3 internal chain of custody and they  
15:02:57 4 don't have a single form for their  
15:03:01 5 chain of custody. That document that  
15:03:04 6 Dr. Goldberger refers to in his  
15:03:07 7 statement is not a contemporaneous  
15:03:12 8 document. As the panel described it,  
15:03:15 9 it's like an index. LNDD relies on the  
15:03:21 10 individual documents.

15:03:25 11 Next: "Within the  
15:03:27 12 laboratory, the laboratory internal  
15:03:29 13 chain of custody shall be a continuous  
15:03:32 14 record of individuals in possession of  
15:03:34 15 the samples." What you have when you  
15:03:38 16 go through these documents is the  
15:03:41 17 ability to identify every single  
15:03:45 18 individual who touched the bottles in  
15:03:50 19 order. It doesn't say A to B, B to C.  
15:03:55 20 It shows you the end of the movement,  
15:03:58 21 not the start.

15:04:02 22 The question you asked, Mr.  
15:04:03 23 Rivkin, when not in an individual's  
15:04:05 24 possession it should be documented that  
15:04:07 25 the sample or aliquot is within a

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15:04:10 2 controlled zone, and then there is a  
15:04:11 3 definition of a controlled zone. This  
15:04:21 4 is the special area of the laboratory  
15:04:23 5 where access is monitored and you have  
15:04:25 6 to have a record of who checks in and  
15:04:28 7 who checks out.

15:04:33 8 "The sample or aliquot must  
15:04:44 9 be in an individual's possession when  
15:04:46 10 in an uncontrolled or unsecured area of  
15:04:50 11 the laboratory." Okay. That's -- we  
15:04:59 12 have both. It's always in a controlled  
15:05:01 13 area of the laboratory and we have a  
15:05:04 14 record of possession.

15:05:05 15 "The entry into the  
15:05:08 16 laboratory internal chain of custody  
15:05:10 17 should be completed at the time that  
15:05:11 18 any change of possession occurs."  
15:05:16 19 That's true. The summary form is not  
15:05:19 20 contemporaneous. But all of the  
15:05:22 21 individual worksheet entries are  
15:05:26 22 contemporaneous.

15:05:27 23 "The laboratory internal  
15:05:30 24 chain of custody must contain the name  
15:05:32 25 or initials of the individual, date of

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15:05:35 2 transfer, and the purpose of the  
15:05:36 3 transfer of possession."

15:05:40 4 I'll start at the back.

15:05:41 5 Every one of these documents talks  
15:05:43 6 about the purpose, whether it's EPO  
15:05:48 7 aliquoting, or aliquoting for other  
15:05:51 8 methods. Every one of these documents  
15:05:53 9 has the date of transfer. Most of them  
15:05:57 10 have time but you'll notice the time  
15:06:00 11 isn't a requirement.

15:06:02 12 In Mr. Suh's question in his  
15:06:06 13 opening, well, if I have it at one and  
15:06:10 14 Daniel has it at three and Paul has it  
15:06:12 15 at five how do we know what happens in  
15:06:14 16 between? There's no requirement that  
15:06:17 17 all those times be set out there.

15:06:18 18 And finally, the name or  
15:06:23 19 initials, and that links to this, "The  
15:06:28 20 individual's complete signature/name  
15:06:30 21 should be appear in the document at  
15:06:31 22 least once."

15:06:33 23 What you'll find when you go  
15:06:35 24 through these documents is typically  
15:06:38 25 you will find either the initials or

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15:06:41 2 the operator code of the operator in  
15:06:45 3 the chain of custody documents. And  
15:06:47 4 the way you know that that operator is  
15:06:51 5 a particular human being is you go back  
15:06:55 6 to this provision that says "The  
15:06:59 7 individual's complete signature/name  
15:07:01 8 should appear in the documentation at  
15:07:04 9 least once." And I'll go through and  
15:07:06 10 show you an example of that.

15:07:12 11 MR. PAULSSON: One notes in  
15:07:13 12 this paragraph the plural individuals  
15:07:17 13 once and I counted three times  
15:07:21 14 singular. Do you want to make anything  
15:07:26 15 of that?

15:07:27 16 MR. YOUNG: Yes. I mean --  
15:07:28 17 and that's something I think we  
15:07:29 18 addressed in our brief. That if you  
15:07:32 19 needed to know -- if the requirement  
15:07:35 20 was that it was Richard and John be  
15:07:42 21 described as both sides of the  
15:07:46 22 transfer, they wouldn't have said it  
15:07:48 23 that way.

15:07:49 24 "When a group of samples is  
15:08:00 25 aliquoted for testing, a batch

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15:08:05 2 laboratory internal chain of custody  
15:08:08 3 document for screening and/or  
15:08:09 4 confirmation may be used in lieu of  
15:08:12 5 individual aliquot laboratory internal  
15:08:14 6 chain of custody." This responds to  
15:08:17 7 the criticism of Dr. Goldberger that,  
15:08:23 8 well, on some of these documents all I  
15:08:25 9 see is the batch, 17807, I don't see  
15:08:28 10 Mr. Landis' specific number. And  
15:08:31 11 that's because the technical document  
15:08:34 12 says you can do it that way.

15:08:35 13 The next one is forensic  
15:08:40 14 corrections. There are two documents  
15:08:43 15 that pertain to chain of custody that  
15:08:45 16 have nonforensic corrections. Both of  
15:08:49 17 those are explained in the witness  
15:08:52 18 statements. It's patently obvious that  
15:08:56 19 neither one of those as you look at  
15:08:58 20 them would have caused the positive  
15:09:00 21 test result.

15:09:06 22 And finally this technical  
15:09:08 23 document concludes with the following:  
15:09:10 24 "The chain of custody, along with the  
15:09:12 25 relevant testimony," "along with the

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15:09:15 2 relevant testimony from individuals  
15:09:17 3 documented on the chain of custody  
15:09:20 4 documents, should provide a complete  
15:09:21 5 record of the sample or aliquot  
15:09:24 6 location."

15:09:28 7 If we weren't allowed to  
15:09:30 8 bring in witness statements on the  
15:09:31 9 issue of chain of custody, then why  
15:09:36 10 would the technical document say that  
15:09:38 11 the chain of custody along with  
15:09:40 12 relevant testimony from individuals  
15:09:43 13 documented on the chain of custody  
15:09:46 14 should provide a complete record? All  
15:09:48 15 the witness statements that we have  
15:09:49 16 brought in are from individuals whose  
15:09:52 17 names appear in the chain of custody  
15:09:54 18 record.

15:10:11 19 This is Dr. Goldberger's  
15:10:12 20 statement that the only chain of  
15:10:14 21 custody documentation is the summary  
15:10:17 22 sheet. Well, that's not a  
15:10:19 23 contemporaneous document. We're not  
15:10:21 24 saying that's our chain of custody  
15:10:23 25 document. The panel recognized that

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15:10:25 2 that's an index.

15:10:38 3 Exhibit 144 is a map of the

15:10:41 4 laboratory. This entire upstairs and

15:10:45 5 downstairs area is a controlled zone.

15:10:52 6 If you want to see, for example, what

15:10:57 7 happens when one of the technicians

15:11:01 8 finishes aliquoting in room 006 and

15:11:08 9 then puts the sample into refrigerator

15:11:12 10 1, you can see it here. She walks

15:11:15 11 across the hall. What we've done is as

15:11:29 12 this exhibit, do a tracking sheet for

15:11:34 13 the individuals in possession, the day

15:11:37 14 of the transfer, purpose of the

15:11:39 15 transfer is set forth in the document,

15:11:41 16 and then the pages that you can go to

15:11:46 17 for the explanation, the backup

15:11:50 18 documentation.

15:11:51 19 All of these pages annotated

15:11:56 20 as a demonstrative are attached to the

15:12:00 21 declaration of Claire Buisson.

15:12:03 22 Same map for the B and same

15:12:12 23 chain for the B.

15:12:13 24 Dr. Goldberger raises a

15:12:41 25 point with respect to not the chain of

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15:12:45 2 custody of the B bottle and where it  
15:12:49 3 was put, but the receipt of the B  
15:12:54 4 bottle. And what he says is that it  
15:13:04 5 wasn't properly signed for; and the  
15:13:09 6 name and signature of the person --  
15:13:12 7 here's what's required, the name and  
15:13:14 8 signature of the person delivering or  
15:13:15 9 transferring custody of the samples,  
15:13:18 10 the date, the time of receipt, name and  
15:13:21 11 signature of the laboratory  
15:13:22 12 representative receiving the samples  
15:13:24 13 shall be documented.

15:13:25 14 So there's the transporter.  
15:13:37 15 There's his signature. There's date.  
15:13:41 16 There's the signature of the receipt.  
15:13:44 17 Here's the issue that was pointed out  
15:13:47 18 in opening this morning about 9:35 in  
15:13:51 19 the morning versus 9:35 in the evening.  
15:13:54 20 There's the sample number. And in the  
15:13:58 21 declaration you can see that this  
15:14:02 22 person writes her fours funny, it's  
15:14:07 23 995474. In the other samples in the  
15:14:10 24 batch that's a four, that's a four.

15:14:26 25 Mr. Suh talked at length



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15:14:27 2 about the inconsistencies between  
15:14:30 3 document 1590 and 1591. Let me take  
15:14:38 4 you through that.

15:14:38 5 First, here are the initials  
15:14:48 6 of L. Martin. How do we know that  
15:14:52 7 these are the initials of L. Martin?  
15:15:02 8 Because in the documentation package at  
15:15:04 9 Page USADA 0014, there's a list of  
15:15:08 10 everybody with their name and initials,  
15:15:11 11 and here is L. Martin and here's how he  
15:15:14 12 signs.

15:15:15 13 Second, this is the batch  
15:15:25 14 number for Mr. Landis' sample.

15:15:28 15 Third, the bottle was  
15:15:45 16 obtained at 7:25. The purpose by L.  
15:15:50 17 Martin at 7:25, the purpose was to  
15:15:52 18 prepare aliquots for EPO. Here were  
15:16:06 19 the steps that were performed, and then  
15:16:09 20 the bottle was transferred by L. Martin  
15:16:14 21 at 9 o'clock to room 006.

15:16:23 22 Start here with operator 19.  
15:16:44 23 Operator 19 is M. Garcia. There's her  
15:17:03 24 name and there's her signature on USADA  
15:17:06 25 13.

1 P R O C E E D I N G S

15:17:06 2 This is the same batch. She  
15:17:19 3 takes custody at 9:10. Her purpose is  
15:17:23 4 to aliquot for the conventional  
15:17:28 5 analyses. She puts the bottle back in  
15:17:34 6 refrigerator number 1 at 9:25. And if  
15:17:39 7 you look at your map that's the  
15:17:41 8 refrigerator right across the hall.

15:17:45 9 Now here's the point that  
15:17:48 10 Mr. Suh and Mr. Goldberger pointed out.  
15:17:53 11 In this part of the form Ms. Garcia is  
15:17:57 12 describing what she did. Here she is  
15:18:02 13 describing what someone else did and  
15:18:06 14 she describes it incorrectly. Because  
15:18:09 15 as you saw from the previous document,  
15:18:13 16 L. Martin, who actually did it, took  
15:18:18 17 the sample out of storage at 7:25. And  
15:18:22 18 his number is 44, not 42. So yes, she  
15:18:28 19 made a mistake in filling out this part  
15:18:31 20 of the form, but it isn't anything she  
15:18:34 21 did. She was talking about what  
15:18:36 22 somebody else did and we have the  
15:18:38 23 correct document from that somebody  
15:18:40 24 else.

15:18:53 25 MR. PAULSSON: Why would

1 P R O C E E D I N G S

15:18:54 2 she fill that out at all? Not why she  
15:18:58 3 would make a mistake.

15:18:59 4 MR. YOUNG: An anachronism  
15:19:01 5 in the forms. I would expect if they  
15:19:04 6 went back over their forms they would  
15:19:06 7 have people fill out only things they  
15:19:08 8 did as opposed to things other people  
15:19:10 9 did. That would be a better practice.

15:19:21 10 This is the document Mr. Suh  
15:19:22 11 showed you this morning, 006. We would  
15:19:25 12 have been happy to provide a better  
15:19:26 13 copy of that document. When they asked  
15:19:28 14 for a better copy of document 105 we  
15:19:30 15 produced it. We're not hiding that.  
15:19:32 16 If anybody wants a better copy, we'll  
15:19:35 17 give them the best copy we've got.  
15:19:38 18 What this shows is various ins and outs  
15:19:43 19 of refrigerator number 1. It does not  
15:19:53 20 show because it shows on other  
15:19:55 21 documents that L. Martin took it out  
15:19:57 22 and that M. Garcia put it back in.  
15:20:05 23 Those are documented on other  
15:20:06 24 documents. These are other  
15:20:14 25 transactions in and out of refrigerator

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15:20:16 2 number 1.

15:20:29 3 Question: Go to

15:20:30 4 chromatography. Was the chromatography

15:20:33 5 of Mr. Landis' fraction 3 samples a

15:20:38 6 violation of the International Standard

15:20:41 7 for Laboratories? Well, what the

15:20:43 8 International Standard for Laboratories

15:20:47 9 says is that you have to have methods

15:20:49 10 that avoid matrix interference, etc.

15:20:55 11 That's what the International Standard

15:20:58 12 for Laboratories says. It doesn't say

15:20:59 13 that any time you have a problem with

15:21:03 14 the chromatogram in the nature of

15:21:08 15 matrix interference or whatever it is,

15:21:10 16 that that is a violation of the

15:21:12 17 International Standard for

15:21:14 18 Laboratories. That's Dr. Ayotte's

15:21:17 19 testimony and it's also commonsense.

15:21:18 20 But let's go beyond that and

15:21:20 21 ask whether the chromatograms produce

15:21:23 22 reliable results and who you have

15:21:34 23 testifying on that are Dr. Matthews.

15:21:37 24 He gives you his reasons why he thinks

15:21:39 25 the chromatograms produce reliable

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15:21:42 2 results, and Dr. Matthews was the guy  
15:21:46 3 who invented the IRMS method.

15:21:48 4 You have Dr. Jumeau.

15:21:51 5 Dr. Jumeau is the person who wrote the  
15:21:55 6 software that's used on the IsoPrime  
15:21:58 7 instrument. She wrote the manual that  
15:22:00 8 was given to LNDD and she designed the  
15:22:04 9 predecessor instrument.

15:22:08 10 You have Dr. Brenna who has  
15:22:10 11 been doing IRMS consecutively for -- or  
15:22:13 12 for the last 20 consecutive years.

15:22:18 13 You also have the heads of  
15:22:20 14 laboratories, Dr. Ayotte and Dr.  
15:22:22 15 Schaenzer all saying these are good  
15:22:25 16 chromatograms.

15:22:26 17 So what is it that I can add  
15:22:29 18 to that? I guess what I can do is to  
15:22:34 19 simply show you a picture to help  
15:22:37 20 explain things and I'm going to focus  
15:22:53 21 on fraction 3 because that's where the  
15:22:56 22 positive test is. This is the IRMS  
15:22:58 23 chromatograms. This is the 5-alpha,  
15:23:01 24 this is the Pdiol. What's important is  
15:23:05 25 to look at what the chromatograms look

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15:23:09 2 like between here and here. Because  
15:23:13 3 these are the two peaks that you're  
15:23:16 4 comparing.

15:23:16 5 It's also if you remember  
15:23:19 6 from the witness statement of Dr.  
15:23:22 7 Brenna when you're talking about  
15:23:23 8 linearity and things like that, that it  
15:23:25 9 really only makes a difference when  
15:23:27 10 you're comparing peaks of greatly  
15:23:30 11 different size. Well, in the IRMS the  
15:23:34 12 5-alpha and the Pdiol peak are about  
15:23:37 13 the same size.

15:24:01 14 This is from Dr. Matthews'  
15:24:03 15 witness statement and you can see it's  
15:24:05 16 just a blowup of this relevant portion  
15:24:09 17 of the chromatogram where you have  
15:24:15 18 relatively little baseline and  
15:24:17 19 relatively little peak interference.

15:24:32 20 I don't know whether Dr.  
15:24:33 21 Meier-Augenstein's argument that  
15:24:35 22 there's a little peak in here somewhere  
15:24:38 23 that is going to affect the value of  
15:24:42 24 the 5-alpha peak is surviving into this  
15:24:45 25 hearing or not, but let me just address

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15:24:49 2 it a couple of ways.

15:24:52 3 First, as Dr. Matthews  
15:24:54 4 points out, there's no way -- and Dr.  
15:25:02 5 Meier-Augenstein's argument was when  
15:25:03 6 you look at the GC/MS chromatogram,  
15:25:06 7 there's a little peak which you can't  
15:25:08 8 see on this scale. As Dr. Matthews  
15:25:12 9 points out that peak would be so little  
15:25:14 10 that it would have a negligible effect  
15:25:18 11 on the delta value. And the theory  
15:25:20 12 that it might have a minus 70 or  
15:25:25 13 greater delta value which would cause a  
15:25:27 14 two delta unit variation like the slide  
15:25:31 15 that Mr. Suh showed you is nonsense  
15:25:35 16 because it's based on either incomplete  
15:25:39 17 combustion of a natural peak, which  
15:25:42 18 Dr. Matthews says won't happen, the big  
15:25:45 19 peaks might incompletely combust, but  
15:25:48 20 not a little peak, or it's based on  
15:25:56 21 something being in Landis' sample that  
15:25:58 22 isn't natural and that's what the whole  
15:26:00 23 cleanup portion of the analysis is all  
15:26:02 24 about.

15:26:02 25 Second, this is the two over

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15:26:07 2 one trace that you've heard about. And  
15:26:10 3 what Dr. Brenna tells you in his  
15:26:13 4 witness statement and what he testified  
15:26:15 5 at the last hearing was that no, this  
15:26:19 6 little peak is not co-eluted into the  
15:26:22 7 5-alpha peak, I can see it. It's this  
15:26:25 8 peak right here and it goes back to  
15:26:27 9 baseline right there. This is the  
15:26:29 10 5-alpha in red, this is the 5-beta in  
15:26:33 11 blue, and this peak right here, it goes  
15:26:36 12 back to baseline, is that little peak.  
15:26:38 13 So it's not co-eluted.

15:26:42 14 And third, what Dr. Jumeau  
15:26:45 15 tells you is that if that little peak  
15:26:47 16 would have had some wildly negative  
15:26:49 17 value, this two over one trace would  
15:26:53 18 not have been here, it would have been  
15:26:55 19 down off the charts because that's what  
15:26:57 20 you would see with a peak that had a  
15:27:01 21 negative 70 or more value.

15:27:03 22 Next let me address the peak  
15:27:26 23 identification issue. Two steps in the  
15:27:30 24 process. Two instruments. First  
15:27:35 25 instrument is the GC/MS instrument. On



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15:27:41 2 that instrument run contemporaneously  
15:27:45 3 with the athlete's sample and the blank  
15:27:49 4 urine is a known standard for all six  
15:27:53 5 of the compounds we're interested in.  
15:27:57 6 And when you compare those using  
15:28:02 7 retention times you don't even need to  
15:28:05 8 get to relative retention times. When  
15:28:23 9 you compare those using retention times  
15:28:25 10 under the technical document, the peaks  
15:28:28 11 in Landis' sample and the blank urine  
15:28:34 12 can positively be identified as the  
15:28:39 13 internal standard, the 5-beta, the  
15:28:43 14 5-alpha, and Pdiol.

15:28:46 15 Nobody's arguing about this.  
15:28:47 16 It's like a police lineup and the guys  
15:28:51 17 are saying I'm the internal standard,  
15:28:53 18 I'm 5-beta, I'm 5-alpha and I'm Pdiol.  
15:28:57 19 And the MS part of this process, where  
15:29:01 20 they actually break it down into ions  
15:29:03 21 is like the lie detector test on top of  
15:29:06 22 that where they not only are saying  
15:29:09 23 yes, this is the peak, but there's  
15:29:11 24 nothing of significance else under that  
15:29:14 25 peak.

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15:29:14 2 So that's the GC/MS part of  
15:29:27 3 this analysis that unequivocally  
15:29:32 4 establishes those four peaks in  
15:29:34 5 Landis's sample in the blank urine.

15:29:36 6 So the next thing that  
15:29:38 7 happens is they take Landis' sample and  
15:29:45 8 they take the blank urine out of the  
15:29:48 9 GC/MS and they put them in the IRMS  
15:29:52 10 instrument. And they analyze those.

15:29:55 11 So what you have and it's  
15:30:27 12 easy if you spread out what I gave you,  
15:30:32 13 but up at the top you have the  
15:30:40 14 positively identified GC/MS of Mr.  
15:30:47 15 Landis' sample. All four of these  
15:30:50 16 suspects have identified themselves.  
15:30:53 17 Here you have the IRMS of his sample.  
15:30:57 18 Here you have the IRMS of the blank  
15:31:01 19 urine. And here you have the IRMS of  
15:31:07 20 the Mix Cal Acetate. All of these  
15:31:12 21 three are run contemporaneously. These  
15:31:18 22 two are not run contemporaneously.

15:31:22 23 MR. RIVKIN: Sorry, just so  
15:31:23 24 when we look back at the record we can  
15:31:25 25 understand what you're saying, can you

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15:31:28 2 repeat what you just said but talk  
15:31:30 3 about the upper chart, you know, the  
15:31:33 4 middle, the left, the right.

15:31:35 5 MR. YOUNG: Sure. The top  
15:31:38 6 chart is fraction 3 of Mr. Landis' urine  
15:31:43 7 measured on the GC/MS.

15:31:44 8 Directly below it is  
15:31:49 9 fraction 3 of Mr. Landis' urine  
15:31:51 10 measured on the IRMS.

15:31:52 11 To the right is fraction 3  
15:31:57 12 of the blank urine measured on the  
15:32:00 13 IRMS.

15:32:01 14 And to the left is the Mix  
15:32:09 15 Cal Acetate standard, control, run on  
15:32:12 16 the IRMS.

15:32:13 17  
15:32:35 18 THE PRESIDENT: Just because  
15:32:36 19 the record isn't clear yet. What is  
15:32:38 20 the one under here, just tell me that?  
15:32:43 21 What is this one?

15:32:45 22 MR. YOUNG: That is Landis  
15:32:47 23 fraction 3 on the IRMS.

15:32:54 24 THE PRESIDENT: Thank you.

15:32:57 25 MR. YOUNG: Now remember the

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15:32:58 2 technical document that talks about  
15:33:00 3 identification? It doesn't talk about  
15:33:03 4 relative retention times, it talks  
15:33:07 5 about substances that are analyzed  
15:33:14 6 contemporaneously, and you've seen lots  
15:33:17 7 of this in the brief. It doesn't talk  
15:33:19 8 about comparisons between the GC/MS  
15:33:22 9 instrument and the IRMS instrument, but  
15:33:24 10 it does talk about comparisons between  
15:33:28 11 the same instrument. So, in the blank  
15:33:43 12 urine the retention time of the  
15:33:48 13 internal standard is 867 seconds. In  
15:33:56 14 Landis' urine the retention time is 867  
15:34:05 15 seconds. In the control, the Mix Cal  
15:34:09 16 Acetate the retention time is 866  
15:34:12 17 seconds. In the blank urine, the  
15:34:18 18 5-beta is 1,306 seconds. In Landis'  
15:34:28 19 sample it's 1,304 seconds. And in the  
15:34:33 20 Mix Cal Acetate it's 1,302 seconds.  
15:34:38 21 Mind you, we're talking about it  
15:34:40 22 matches if it's within one percent. So  
15:34:43 23 these are phenomenally close.  
15:34:45 24 In the blank urine, the  
15:34:49 25 5-alpha is 1,336 seconds and in Landis'

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15:34:59 2 sample it's 1,337 seconds. And in the  
15:35:04 3 blank urine the Pdiol is 1,651 seconds,  
15:35:10 4 and in Landis' sample it's 1,652  
15:35:16 5 seconds.

15:35:16 6 Now this is the same blank  
15:35:19 7 urine that LNDD uses in every single  
15:35:21 8 test that they measure. And the  
15:35:25 9 results of that for purposes of  
15:35:27 10 retention time are exactly the same as  
15:35:33 11 Landis' sample. And two of the three  
15:35:35 12 points are confirmed by the Mix Cal  
15:35:37 13 Acetate.

15:35:37 14 There are two other ways  
15:35:42 15 that you can confirm the identity of  
15:35:44 16 these peaks. The other is pattern. So  
15:35:51 17 we know that this is the 5-beta.  
15:35:55 18 What's the next peak after? It's the  
15:35:59 19 5-alpha. And if this isn't Pdiol, then  
15:36:04 20 where did Pdiol go? It's the same  
15:36:07 21 urine.

15:36:07 22 The argument is made that  
15:36:27 23 between the GC/MS instrument which  
15:36:30 24 measures ion current and the IRMS  
15:36:35 25 instrument which measures carbon,

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15:36:38 2 you're measuring apples and oranges, so  
15:36:40 3 the peak sizes won't be the same.

15:36:42 4 Well, they're not challenging  
15:36:46 5 the elution pattern but they are  
15:36:49 6 challenging the peak sizes. But that  
15:36:51 7 would be true if we had substances that  
15:36:54 8 had significantly different carbon  
15:36:58 9 composition. But when you look at the  
15:37:01 10 carbon composition of the 5-beta, the  
15:37:05 11 5-alpha and the Pdiol, they're all  
15:37:08 12 approximately the same, and so you would  
15:37:12 13 not expect significant differences in the  
15:37:14 14 size of the peaks in IRMS.

15:37:43 15 Finally, and this is not the  
15:37:44 16 way LNDD did it, but it's the way a  
15:37:48 17 scientist could go back and verify that  
15:37:52 18 the peaks have been correctly  
15:37:53 19 identified could do it, is this: Dr.  
15:37:58 20 Brenna went back and he calculated  
15:38:00 21 mathematically the relationship between  
15:38:05 22 the retention times in the GC/MS and  
15:38:08 23 the retention times in the IRMS, and he  
15:38:12 24 was able to come up with a straight  
15:38:14 25 line predictor. It is not because, as

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15:38:19 2 Dr. Jumeau points out, in IRMS it is  
15:38:22 3 stretched out, the retention times are  
15:38:25 4 stretched out. They're intentionally  
15:38:27 5 started at a different place and then  
15:38:29 6 in IRMS it's stretched out because of  
15:38:31 7 the different method file. But you can  
15:38:34 8 do a mathematical prediction that if  
15:38:38 9 you give Dr. Brenna the GC/MS retention  
15:38:42 10 time he can tell you the IRMS retention  
15:38:45 11 time of 5-alpha or a beta or Pdiol.

15:39:04 12 This is a chart that Mr. Suh  
15:39:06 13 told you about this morning. Remember  
15:39:10 14 what happened. From the very beginning  
15:39:15 15 of the case Mr. Landis' team demanded  
15:39:19 16 that they have the electronic data  
15:39:21 17 files so that they could see whether  
15:39:26 18 they thought the processing of the data  
15:39:30 19 by LNDD was correct.

15:39:32 20 The panel agreed and allowed  
15:39:38 21 the reprocessing to take place under  
15:39:41 22 the supervision of their expert,  
15:39:44 23 Dr. Botre. You've read Dr. Botre's  
15:39:51 24 report, and Dr. Botre's report  
15:39:53 25 concludes that it confirms the positive

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15:39:55 2 finding by LNDD of 5-alpha Pd1ol.

15:40:00 3 What happened was, at Dr.

15:40:05 4 Botre's request the results were --

15:40:10 5 these are the original results. They

15:40:11 6 were reprocessed by the same people

15:40:15 7 using the same method, but they were

15:40:18 8 also analyzed three different ways.

15:40:22 9 Dr. Davis' request was we need to

15:40:25 10 analyze these electronic data files,

15:40:29 11 which by the way, is something that has

15:40:33 12 never happened in any doping case that

15:40:35 13 I've ever heard of, or at least any

15:40:40 14 modern doping case, and so they were

15:40:45 15 reprocessed on the newer instrument

15:40:48 16 with the newer software that doesn't

15:40:51 17 involve manual integration. And so

15:40:55 18 this takes the whole manual integration

15:40:57 19 issue out of it.

15:40:58 20 And here's what you get.

15:41:02 21 For the athlete's sample, 5-alpha goes

15:41:08 22 from 6.14 to 7.22. 5-alpha goes for

15:41:14 23 the B 6.39 to 7.03.

15:41:17 24 This is what he asked for.

15:41:23 25 Instead of being horrified with the



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15:41:26 2 result, they've tried to turn a  
15:41:27 3 negative into a positive and say, well,  
15:41:29 4 there are other inconsistencies here.  
15:41:32 5 And the inconsistencies do not have to  
15:41:35 6 do with whether or not his sample is  
15:41:39 7 positive. It is positive no matter how  
15:41:43 8 it is processed.

15:41:45 9 Remarkably, it is positive  
15:41:51 10 even when you have no baseline  
15:41:54 11 subtraction. Now remember the issue in  
15:41:57 12 manual integration where you put it on  
15:41:59 13 the peak and all of that kind of stuff.  
15:42:01 14 Well, in this case you include the  
15:42:05 15 entire baseline. And what does that  
15:42:11 16 do? It leaves his sample positive.  
15:42:16 17 That answers your whole manual  
15:42:18 18 integration issue.

15:42:19 19 He also asked that it be  
15:42:25 20 processed automatically. Now, the  
15:42:30 21 whole reason, as Dr. Jumeau who wrote  
15:42:34 22 the software tells you in her  
15:42:36 23 statement, that you have manual  
15:42:40 24 integration is as a quality control.  
15:42:42 25 It wouldn't have been put in there if

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15:42:44 2 there was no reason to use it. And so  
15:42:46 3 you should never just let the  
15:42:49 4 instrument run on auto. But what Mr.  
15:42:56 5 Suh pointed to was, well, when it ran  
15:42:58 6 on auto look what happened to these  
15:43:00 7 blank urines. And the answer to that  
15:43:04 8 is pretty simple. This was Dr. Davis'  
15:43:06 9 idea to run it on auto. Nobody else  
15:43:13 10 thought that was a good idea and when  
15:43:17 11 you run it on auto without the quality  
15:43:19 12 control you get results like that.

15:43:20 13 These are the results from  
15:43:39 14 the additional seven samples that were  
15:43:43 15 analyzed in July 2007. What you can  
15:43:52 16 see is even though the T/E ratios had  
15:43:55 17 been negative, four of these other  
15:43:58 18 samples, in the B sample, showed  
15:44:03 19 evidence of exogenous testosterone use  
15:44:07 20 or some testosterone precursor. It was  
15:44:12 21 done and blind samples, they had these  
15:44:15 22 three from Aguilera added in so the  
15:44:19 23 laboratory technicians didn't know  
15:44:21 24 whether it was one of the Aguilera  
15:44:23 25 samples or a Landis sample.

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15:44:31 2 THE PRESIDENT: Can I just  
15:44:31 3 ask you this. That's done about a year  
15:44:33 4 later.

15:44:34 5 MR. YOUNG: Right.

15:44:36 6 THE PRESIDENT: Is it the  
15:44:37 7 case that the samples retain their  
15:44:40 8 characteristics over that period of  
15:44:42 9 time?

15:44:43 10 MR. YOUNG: Right, yes.  
15:44:44 11 There's not an issue with that. And  
15:44:46 12 that was -- there were lots of  
15:44:47 13 arguments about whether LNDD would be  
15:44:52 14 allowed to do this. The bidding goes  
15:44:59 15 sort of like this. Landis says it  
15:45:01 16 makes no sense for me to dope during  
15:45:03 17 just one day on the Tour de France.  
15:45:06 18 The response was well let's take a look  
15:45:08 19 at your other samples and see if you  
15:45:09 20 were doping on other days. Strong  
15:45:12 21 protest. That was not raised as an  
15:45:14 22 issue in the protest. And the panel  
15:45:17 23 said go ahead and it was done in this  
15:45:19 24 safeguarded manner. But I recall no  
15:45:23 25 issue, and I'm sure Mr. Suh will

1 P R O C E E D I N G S

15:45:26 2 correct me if I'm wrong, that there was  
15:45:27 3 a degradation issue that would have  
15:45:29 4 affected this, and I think I can point  
15:45:33 5 you to a Ray Kazlauskas paper who's the  
15:45:37 6 head of the Australian lab that says  
15:45:40 7 sample degradation would not affect  
15:45:43 8 IRMS results.

15:45:49 9 MR. PAULSSON: Do you have a  
15:45:49 10 position as to the duration of efficacy  
15:45:58 11 of the boosting effect in terms of  
15:46:00 12 hours?

15:46:01 13 MR. YOUNG: The boosting  
15:46:03 14 effect of testosterone?

15:46:05 15 MR. PAULSSON: Yes, in this  
15:46:06 16 case.

15:46:06 17 MR. YOUNG: Yes. I think  
15:46:08 18 what you'll hear from Dr. Clark is the  
15:46:17 19 following: That in normal people there  
15:46:20 20 are no good studies to show that taking  
15:46:25 21 testosterone improves endurance.  
15:46:32 22 However, those are normal people. When  
15:46:34 23 you're dealing with someone who is in  
15:46:36 24 an extreme event like the Tour de  
15:46:40 25 France, I think Dr. Amory and

## 1 P R O C E E D I N G S

15:46:42 2 Dr. Shackelton and Dr. Clark will all  
15:46:45 3 agree that the consequence of that  
15:46:48 4 event is to lower your natural  
15:46:51 5 testosterone levels. And that just  
15:47:01 6 happens. And what Dr. Clark will say  
15:47:05 7 is that a reason that a cyclist might  
15:47:08 8 take testosterone during an event in a  
15:47:12 9 way that they wouldn't get caught, I  
15:47:14 10 mean they're not going to take a big  
15:47:16 11 testosterone injection, is to try to  
15:47:17 12 build back up testosterone levels so  
15:47:26 13 that it effects their ability to  
15:47:28 14 recover for the next day. Or build  
15:47:36 15 muscles. That's not what we're talking  
15:47:38 16 about. It's your ability to recover  
15:47:39 17 for the next day. That would be the  
15:47:41 18 scientific explanation.

15:47:43 19 The other's a little more  
15:47:46 20 practical information. One of our  
15:47:48 21 exhibits, and I'll point it out to you in  
15:47:50 22 closing, I don't remember the number off  
15:47:52 23 the top of my head, shows the number of  
15:47:58 24 cyclists that UCI has caught using  
15:48:01 25 testosterone over the last few years. So

1 P R O C E E D I N G S

15:48:04 2 whether there is peer-reviewed medical  
15:48:06 3 efficacy to it or not, cyclists seem to  
15:48:10 4 be doing it for whatever reason.

15:48:13 5 MR. PAULSSON: So the  
15:48:14 6 expectation would be by ingestion  
15:48:17 7 within 24 hours of a positive test?

15:48:20 8 MR. YOUNG: You can do it a  
15:48:21 9 couple of different ways.

15:48:23 10 MR. PAULSSON: I know, but  
15:48:24 11 that would be the logical --

15:48:25 12 MR. YOUNG: You could put  
15:48:26 13 together a doping regimen that did a  
15:48:29 14 couple of different things. The  
15:48:32 15 studies of oral testosterone show that  
15:48:35 16 it will disappear from the urine in 8  
15:48:39 17 to 24 hours. So you could take oral  
15:48:44 18 testosterone and it would be gone, you  
15:48:49 19 could take it at night and it would be  
15:48:50 20 very difficult to measure, if at all,  
15:48:53 21 when you're tested the next day after  
15:48:55 22 the race. Whether you would still have  
15:48:59 23 some performance recovery benefit, I  
15:49:05 24 don't know.

15:49:05 25 As far as testosterone gel,

1 P R O C E E D I N G S

15:49:09 2 that would last longer, depending on  
15:49:13 3 how much you put on, depending on where  
15:49:18 4 you put it on. If you used a scrotal  
15:49:20 5 patch it would have a different affect  
15:49:22 6 than if you just rubbed the gel on your  
15:49:25 7 chest.

15:49:26 8 MR. PAULSSON: Maybe I  
15:49:27 9 shouldn't ask you this, but if you have  
15:49:36 10 developed an answer on your side, we  
15:49:38 11 might hear it from experts, but what  
15:49:40 12 would be the -- what would be the  
15:49:42 13 purpose of ingestion before the  
15:49:46 14 Champs-Elysees?

15:49:48 15 MR. YOUNG: There would be  
15:49:49 16 no purpose. There's Champs-Elysees on  
15:50:01 17 the 23rd. There would be no particular  
15:50:04 18 purpose taking testosterone before that  
15:50:10 19 race. There would be a lot of purpose  
15:50:11 20 taking testosterone before the race on  
15:50:14 21 the 22nd which is the important time  
15:50:16 22 trial. If Mr. Landis used testosterone  
15:50:23 23 gel before the time trial on the 22nd,  
15:50:27 24 it is not only possible, but likely  
15:50:31 25 that there would still be diol evidence

1 P R O C E E D I N G S

15:50:35 2 in his urine the next day.

15:50:41 3 And what you see is if he

15:50:48 4 uses on the 20th, a couple of days it

15:50:55 5 may still have carried over, may not

15:50:57 6 have. But there's a reason for him to

15:51:00 7 use here again. If he uses on the

15:51:04 8 13th, if this was oral as opposed to a

15:51:08 9 gel, it wouldn't be around on the 14th.

15:51:11 10 On this topic, Dr. Amory's

15:51:25 11 argument that the 5-alpha and the

15:51:27 12 5-beta always have to go up and down

15:51:30 13 together, it's not anything he studied.

15:51:33 14 All he's done is read the studies and

15:51:39 15 when you read the studies, it happens a

15:51:41 16 lot. A lot of people, most people

15:51:43 17 5-alpha, 5-beta go up and down

15:51:46 18 together. But we're talking about

15:51:48 19 individual differences and a lot of

15:51:49 20 people that's not the case. A lot of

15:51:52 21 people have a 5-alpha preference. Some

15:51:55 22 people have a 5-beta preference.

15:51:57 23 Depending on what you take, if it's a

15:52:00 24 gel it's more likely to be a 5-alpha

15:52:02 25 preference. If it's a cream it's more



1 P R O C E E D I N G S

15:52:04 2 likely to be a 5 -- excuse me. If it's  
15:52:07 3 a cream or it's a gel it's more likely  
15:52:10 4 to be a 5-alpha preference. If it's  
15:52:12 5 oral it's more likely to be a 5-beta  
15:52:14 6 preference.

15:52:14 7 What Mr. Suh told you this  
15:52:18 8 morning about T/E and T/E ratio going  
15:52:22 9 up and down with the diols, I don't  
15:52:27 10 think he meant to mislead you, but it's  
15:52:30 11 just simply not correct. There are  
15:52:33 12 lots of studies that show that T/E  
15:52:37 13 ratio fluctuates all over the place  
15:52:50 14 even when someone's on a daily regime  
15:52:53 15 of testosterone gel. This is a guy in  
15:52:56 16 the Schaezner study who was given  
15:53:00 17 testosterone gel every morning and  
15:53:03 18 here's his T/E ratio. Sometimes it's  
15:53:06 19 up to 7. Sometimes it's down to 1.  
15:53:10 20 Sometimes between one day and the next  
15:53:22 21 it goes from 5 to 1.

15:53:25 22 You can't put any weight  
15:53:29 23 whatsoever -- this is a guy in a  
15:53:34 24 controlled study who's getting T-Gel  
15:53:37 25 every morning. And you've got those

1 P R O C E E D I N G S

15:53:39 2 kinds of T/E fluctuations. You can't  
15:53:41 3 put any weight whatsoever on these  
15:53:45 4 little differences between 1 and 2.5  
15:53:47 5 and 1.8 and the like. Certainly you  
15:53:49 6 can put emphasis on the 11, but using  
15:53:54 7 the rest of these T/E ratios really  
15:53:57 8 does nothing for you.

15:53:58 9 Final comment --

15:54:01 10 MR. RIVKIN: I think the  
15:54:02 11 issue wasn't the fluctuation in the T/E  
15:54:04 12 ratio, but the fact that the T/E ratio  
15:54:07 13 was always within an acceptable norm  
15:54:12 14 even while the IRMS study was showing  
15:54:15 15 an adverse findings with respect to the  
15:54:19 16 alpha diol.

15:54:22 17 MR. YOUNG: What you have  
15:54:23 18 when you look at the studies is some  
15:54:28 19 individuals have a nice pattern where  
15:54:32 20 their diol goes up and their T/E goes  
15:54:34 21 up. Other individuals have their diol  
15:54:40 22 go up and their T/E doesn't move at  
15:54:44 23 all. The correlation between what  
15:54:49 24 happens on your diol and what happens  
15:54:52 25 on your T/E is absolutely not direct.

1 P R O C E E D I N G S

15:54:57 2 I mean that's why, and it was the  
15:54:59 3 question you asked, that's why we do  
15:55:02 4 the IRMS test. That's why, for  
15:55:05 5 example, in the Hartman case, this is a  
15:55:12 6 guy who had a normal T/E ratio, they  
15:55:15 7 did IRMS and he had a positive test  
15:55:19 8 with IRMS and then he came back and  
15:55:25 9 said oh, yes, I've been taking external  
15:55:28 10 testosterone for medical reasons and it  
15:55:30 11 turned into a therapeutic use case.

15:55:32 12 I mean it is simply not true  
15:55:33 13 to say that this fluctuation between  
15:55:38 14 diols and T/E ratio is a direct  
15:55:42 15 comparison.

15:55:43 16 MR. RIVKIN: Am I right  
15:55:44 17 though that the lab only tested for the  
15:55:46 18 T/E ratio and only ran the IRMS if the  
15:55:49 19 T/E ratio indicated a potential  
15:55:52 20 problem?

15:55:52 21 MR. YOUNG: It didn't have  
15:55:53 22 to, but that was their practical  
15:55:55 23 approach. It cost, as you can see, a  
15:55:57 24 lot of time and a lot of money to do  
15:55:59 25 the IRMS. Their practical approach

1 P R O C E E D I N G S

15:56:06 2 was, as a general matter, to do T/E  
15:56:08 3 ratio first as a screen and then to do  
15:56:11 4 IRMS.

15:56:11 5 If they were told to do IRMS  
15:56:16 6 first they could. That happens all the  
15:56:18 7 time.

15:56:26 8 Final comment. There's been  
15:56:27 9 a constant refrain throughout this  
15:56:31 10 case, and we've heard some of it today  
15:56:34 11 from Mr. Landis' team that LNDD and  
15:56:40 12 USADA and my law firm and all of the  
15:56:46 13 experts are a bunch of liars who are  
15:56:49 14 trying to hide the truth. Rather than  
15:56:55 15 respond to that in kind, which is hard  
15:56:59 16 not to do, I'll simply let you be the  
15:57:04 17 judge of which side here is trying to  
15:57:06 18 diligently pursue the truth and which  
15:57:08 19 side has another agenda.

15:57:10 20 Thank you.

15:57:13 21 THE PRESIDENT: Thank you  
15:57:14 22 very much, Mr. Young.

15:57:17 23 MR. PAULSSON: One question.  
15:57:18 24 Mr. Young, did de Boer have anything to  
15:57:20 25 do with observing the T/E determination?

1 P R O C E E D I N G S

15:57:28 2 MR. YOUNG: Run that by me  
15:57:30 3 again.

15:57:31 4 MR. PAULSSON: de Boer, did  
15:57:32 5 he have anything to do with monitoring  
15:57:33 6 or observing the T/E determination?

15:57:36 7 MR. YOUNG: Yes, he observed  
15:57:37 8 when they did the B, they did both T/E  
15:57:40 9 and IRMS.

15:57:41 10 MR. PAULSSON: Didn't spot a  
15:57:42 11 problem with that?

15:57:43 12 MR. YOUNG: Let me -- I'd  
15:57:49 13 have to pull out the de Boer document  
15:57:52 14 and I don't know whether he did or not.

15:57:53 15 MR. PAULSSON: Fine.

15:57:56 16 MR. YOUNG: But there is  
15:57:58 17 a -- in de Boer's comments he will -- I  
15:58:02 18 know he talks about T/E. I don't know  
15:58:03 19 what his reservations were.

15:58:07 20 THE PRESIDENT: We'll take  
15:58:15 21 an afternoon adjournment of 15 minutes  
15:58:18 22 and then we will have Dr. Goldberger  
15:58:21 23 come forward, please.

15:58:22 24 (A recess was taken.)

16:22:27 25 THE PRESIDENT: Good

1 P R O C E E D I N G S

16:22:28 2 afternoon, Dr. Goldberger.

16:22:30 3 DR. GOLDBERGER: Good

16:22:31 4 afternoon.

16:22:32 5 THE PRESIDENT: In the usual

16:22:33 6 way before you commence I ask you if

16:22:34 7 you would declare and affirm that the

16:22:36 8 expert opinions you express will be

16:22:38 9 your sincerely held views. Do you so

16:22:40 10 affirm?

16:22:41 11 DR. GOLDBERGER: Yes, of

16:22:42 12 course I do.

16:22:44 13 THE PRESIDENT: Mr. Suh, are

16:22:45 14 you ready?

16:22:46 15 MR. SUH: Mr. Chair, I would

16:22:47 16 actually, since we had set aside the

16:22:49 17 decision on the motion to exclude

16:22:52 18 testifying experts in this case, as you

16:22:54 19 will recall, after the opening

16:22:56 20 statements --

16:22:58 21 THE PRESIDENT: Sorry, I'm

16:22:59 22 not with you. I've missed something.

16:23:02 23 I've very sorry.

16:23:03 24 MR. SUH: This morning as a

16:23:04 25 preliminary matter we raised the issue

1 P R O C E E D I N G S

16:23:07 2 of whether or not either party would  
16:23:09 3 want to exclude testifying witnesses  
16:23:10 4 and we indicated we would with the  
16:23:13 5 parallel instruction we normally see in  
16:23:15 6 district court. And we agreed to wait  
16:23:19 7 until after opening statements.

16:23:21 8 THE PRESIDENT: Yes, yes,  
16:23:22 9 I'm sorry. Tell me your view.

16:23:25 10 MR. SUH: We are renewing, I  
16:23:27 11 don't think we've ever dropped, but  
16:23:29 12 just to bring that issue to your  
16:23:32 13 attention.

16:23:33 14 THE PRESIDENT: When you say  
16:23:34 15 the district court, that's the practice  
16:23:36 16 in the U.S. District Court.

16:23:38 17 MR. SUH: The U.S. District  
16:23:39 18 Court. Yes. The other thing that I  
16:23:41 19 wanted to bring the panel's attention  
16:23:42 20 to is, before we go too far, this  
16:23:46 21 opening exhibit slide, the writing on  
16:23:49 22 the bottom here is of course not part  
16:23:52 23 of the regular exhibit, and it reads  
16:23:55 24 R1, V21 and if you look above here it  
16:24:00 25 -- whatever comes after R we don't

1 P R O C E E D I N G S

16:24:03 2 believe is a 1. This is -- this is the  
16:24:07 3 issue that was addressed by their  
16:24:09 4 witnesses. But we don't believe this  
16:24:11 5 is a proper translation to be made.  
16:24:14 6 It's just actually --

16:24:17 7 MR. PAULSSON: I don't  
16:24:18 8 believe you have -- I don't believe  
16:24:19 9 you've identified that document.

16:24:24 10 MR. SUH: It's part of the  
16:24:26 11 opening presentation.

16:24:27 12 THE PRESIDENT: Of Mr.  
16:24:28 13 Young?

16:24:29 14 MR. SUH: I don't know if  
16:24:30 15 it's Page 3. I think it came further  
16:24:31 16 on in.

16:24:33 17 MR. YOUNG: It's Page 6.

16:24:36 18 MR. SUH: If you look right  
16:24:37 19 here it says R1, V21 which is written  
16:24:40 20 in. If you look above it this was an  
16:24:42 21 issue, this is an issue and it says R  
16:24:44 22 something. We believe it looks like an  
16:24:46 23 N. But this is an improper  
16:24:50 24 modification of this document. I just  
16:24:53 25 wanted to note that for the record as



1 P R O C E E D I N G S

16:24:55 2 we proceed.

16:24:57 3 THE PRESIDENT: Do you want  
16:24:58 4 to comment on that at this point, Mr.  
16:25:00 5 Young?

16:25:00 6 MR. YOUNG: That's the way a  
16:25:02 7 lot of French people write their ones  
16:25:05 8 and it looks like an N.

16:25:08 9 THE PRESIDENT: We'll note  
16:25:08 10 it and if Mr. Suh wants to come back to  
16:25:11 11 it later on we'll go into it in greater  
16:25:15 12 detail.

16:25:18 13 MR. BARNETT: I also have  
16:25:19 14 two quick procedural matters before we  
16:25:21 15 respond to the request for exclusion.  
16:25:23 16 First, we do have our responsive motion  
16:25:25 17 regarding Dr. Meier-Augenstein's  
16:25:27 18 testimony that the panel had asked for  
16:25:29 19 so we can circulate that now.

16:25:31 20 The panel had also asked for  
16:25:33 21 our comment by 5 p.m. today regarding  
16:25:36 22 Appellant's motion to strike. We've  
16:25:37 23 had some logistical computer problems  
16:25:40 24 while trying to work remotely this  
16:25:42 25 afternoon. If we could ask for leave

1 P R O C E E D I N G S

16:25:44 2 to file that by 9 p.m. tonight by email

16:25:48 3 I think we can do a more complete job.

16:25:50 4 THE PRESIDENT: That has to

16:25:51 5 do with your right to seek longer

16:25:56 6 penalty period, is that what we're

16:25:57 7 talking about or are we talking about

16:25:59 8 something else?

16:26:00 9 MR. BARNETT: No, that

16:26:01 10 motion we had already filed last week,

16:26:03 11 a response to that motion. This is

16:26:05 12 their 27 page motion to strike, for

16:26:07 13 example, the arguments regarding -- and

16:26:09 14 I'm not sure the status of that motion,

16:26:11 15 but the panel's last order to us was to

16:26:13 16 reply by today. And we would just like

16:26:17 17 two more hours to file that.

16:26:19 18 THE PRESIDENT: Very good.

16:26:19 19 Extension granted.

16:26:20 20 Any objection, Mr. Suh?

16:26:22 21 MR. SUH: No.

16:26:23 22 MR. YOUNG: Thank you very

16:26:24 23 much.

16:26:25 24 MR. BARNETT: And if I may

16:26:26 25 respond to the request for exclusion, I

1 P R O C E E D I N G S

16:26:31 2 have less experience in these matters  
16:26:33 3 than Mr. Young so I would defer to him  
16:26:34 4 on that, but I would find it highly  
16:26:36 5 unusual to exclude experts where the  
16:26:38 6 idea is to get to the truth. And in a  
16:26:41 7 limited time situation that we have  
16:26:44 8 here, the experts hearing the other  
16:26:47 9 expert's comments is not only going to  
16:26:49 10 help the attorneys in questioning the  
16:26:50 11 experts, but to the extent that the  
16:26:51 12 panel wants to ask one expert a  
16:26:53 13 question about a previous expert's  
16:26:55 14 testimony, which I find is usually the  
16:26:57 15 most useful questions that come about  
16:27:00 16 during the day, excluding the experts  
16:27:03 17 would prevent that.

16:27:04 18 Further, we're not only in an  
16:27:06 19 appeal, but we're in the middle of the  
16:27:07 20 appeal where the witness statements,  
16:27:09 21 rebuttal statements have already been  
16:27:11 22 distributed. So for those reasons we  
16:27:13 23 would object to the request for  
16:27:14 24 exclusion.

16:27:15 25 THE PRESIDENT: Anything in

1 P R O C E E D I N G S

16:27:16 2 brief reply, Mr. Suh?

16:27:18 3 MR. SUH: No, I believe  
16:27:19 4 we've made our position clear and I  
16:27:21 5 think the panel has plenty of facts  
16:27:23 6 before it that deal with the reasons,  
16:27:24 7 the basis for our concern.

16:27:46 8 THE PRESIDENT: The  
16:27:47 9 application is respectfully declined.  
16:27:49 10 I suppose it's fair to say that we're  
16:27:52 11 influenced by the fact that this is not  
16:27:54 12 arbitration and experience in  
16:27:59 13 international arbitration.

16:28:00 14 We confine the order at the  
16:28:04 15 moment to expert witnesses. If you  
16:28:06 16 have any different applications to make  
16:28:07 17 with the fact witnesses, we'll consider  
16:28:09 18 those as we come to it, but we would  
16:28:11 19 find it beneficial and efficient to  
16:28:15 20 have the experts hearing the testimony  
16:28:18 21 because it often makes it simpler, and  
16:28:24 22 surprisingly, sometimes you find that  
16:28:26 23 having heard the other expert, an  
16:28:29 24 expert will modify his or her position.

16:28:35 25 Anyway, that's our ruling,

1 P R O C E E D I N G S

16:28:37 2 so there will be no exclusion of  
16:28:38 3 experts.

16:28:39 4 MR. SUH: Thank you.

16:28:40 5 THE PRESIDENT: Dr.  
16:28:45 6 Goldberger, just a little explanation.  
16:28:48 7 It may be unnecessary for you because  
16:28:50 8 of your extensive experience both in  
16:28:53 9 this case and others, but so far as  
16:28:54 10 this panel is concerned, the procedure  
16:28:56 11 will be that Mr. Suh will take you to  
16:28:58 12 your statement and have you confirm it  
16:29:02 13 if he wishes. As we discussed this  
16:29:03 14 morning, he can give you a chance to  
16:29:05 15 comment on selected pieces of the  
16:29:09 16 rebuttal papers. Once he's done that,  
16:29:13 17 Mr. Young will cross examine you and  
16:29:15 18 Mr. Suh will have the right to  
16:29:16 19 reexamine. And it's possible that  
16:29:18 20 after that the panel may have some  
16:29:20 21 questions for you.

16:29:20 22 If we do ask any questions  
16:29:23 23 we always give both counsel the right  
16:29:25 24 to ask any questions arising out of our  
16:29:28 25 questions.

1 P R O C E E D I N G S

16:29:28 2 If there is shown to you in  
16:29:31 3 the course of your questioning any  
16:29:33 4 documentary material that you haven't  
16:29:34 5 seen before or you haven't read for  
16:29:36 6 awhile and you want time to read it  
16:29:38 7 before you answer, we will ensure that  
16:29:40 8 you're given sufficient time for that.

16:29:41 9 Mr. Suh.

16:29:44 10 MR. SUH: Thank you. Maybe  
16:29:47 11 I'd ask the panel would you like us to  
16:29:49 12 conduct questioning from the lectern or  
16:29:51 13 what is your preference?

16:29:53 14 THE PRESIDENT: We're very  
16:29:54 15 happy for you to stay there. There's  
16:29:56 16 no need to go to the lectern. Some  
16:29:58 17 lawyers seem to think that they perform  
16:30:00 18 better standing up but I've never  
16:30:02 19 believed in that theory.

16:30:03 20 MR. SUH: Well then maybe I  
16:30:05 21 should remain seated.

22

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24

25

1 BRUCE GOLDBERGER - DIRECT

2 B R U C E G O L D B E R G E R ,

3 called as a witness on behalf of the

4 Appellant, having been first duly

5 affirmed by the President, was examined

16:30:13 6 and testified as follows:

16:30:13 7 DIRECT EXAMINATION

16:30:15 8 BY MR. SUH:

16:30:15 9 Q. Good afternoon, Dr.

16:30:19 10 Goldberger.

16:30:19 11 A. Good afternoon.

16:30:21 12 Q. Have you supplied this panel

16:30:27 13 with a declaration?

16:30:29 14 A. Yes, I have.

16:30:31 15 Q. And do you now affirm all of

16:30:35 16 the contents of that declaration?

16:30:37 17 A. I do.

16:30:38 18 Q. Have you had an opportunity

16:30:39 19 to review the reply declarations filed

16:30:43 20 in this proceeding?

16:30:46 21 THE PRESIDENT: Mr. Suh,

16:30:47 22 forgive me for interrupting. I think

16:30:49 23 in view of the ruling this morning, and

16:30:52 24 in fairness to the witness, so there's

16:30:54 25 no confusion we need to just run a pen

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16:30:57 2 through paragraphs 54 and 55. This is  
16:30:59 3 no disrespect to you, I should stress,  
16:31:02 4 but you heard the ruling. So it's  
16:31:04 5 confirmed subject to the deletion of  
16:31:06 6 those two paragraphs.

16:31:07 7 MR. SUH: Subject to the  
16:31:09 8 deletions of paragraphs 54 and 55.

16:31:11 9 A. And I've done that.

16:31:16 10 Q. Dr. Goldberger, I believe  
16:31:17 11 you just indicated you've read the  
16:31:18 12 reply declarations in connection with  
16:31:20 13 this matter. Is there anything in  
16:31:22 14 those reply declarations that you would  
16:31:24 15 like to respond to at this time?

16:31:25 16 A. Yes.

16:31:26 17 Q. And which reply declaration  
16:31:29 18 would you turn your attention to?

16:31:30 19 A. Dr. Ayotte's.

16:31:32 20 Q. Please describe where in  
16:31:37 21 Dr. Ayotte's reply declaration --

16:31:40 22 A. It's paragraph 39, Page 18  
16:31:47 23 sections A through F.

16:31:50 24 Q. And it would probably be  
16:31:52 25 easiest and most efficient if you could



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16:31:54 2 just describe what parts of it you  
16:31:56 3 would like to expand upon.

16:31:58 4 A. I'm going to -- I would like  
16:32:00 5 to address all sections from A through  
16:32:03 6 F. Several of them can be disposed of  
16:32:06 7 quite easily because they fall under  
16:32:09 8 the same context. And the others are  
16:32:13 9 more detailed.

16:32:14 10 Q. Which paragraphs, again,  
16:32:16 11 would that be?

16:32:17 12 A. It's paragraph 39.

16:32:20 13 Q. Right. Okay.

16:32:21 14 A. It's 39 in Dr. Ayotte's --

16:32:25 15 Q. Reply declaration.

16:32:26 16 A. Yes.

16:32:34 17 THE PRESIDENT: Do you have  
16:32:34 18 that in front of you?

16:32:35 19 THE WITNESS: I have a copy  
16:32:36 20 in front of me but that's not what's on  
16:32:39 21 the screen.

16:32:40 22 Q. If you have a hard copy, why  
16:32:41 23 don't we proceed while it's being  
16:32:53 24 brought up on the screen.

16:32:54 25 A. Item A is in regards to an

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16:33:00 2 item that has been discussed  
16:33:02 3 repetitively today which is on USADA  
16:33:06 4 document 24 with regards to the time  
16:33:12 5 noted under reception in the  
16:33:13 6 laboratory. And the document from  
16:33:18 7 Rahali indicates July 20th, '06 at 9  
16:33:23 8 hours 35 minutes. I'd say I'm an  
16:33:28 9 individual that's not terribly familiar  
16:33:29 10 with the process of the tour including  
16:33:32 11 when the sample is collected and  
16:33:33 12 transported and received in the  
16:33:36 13 laboratory. Only recently do I now  
16:33:39 14 understand exactly how that process  
16:33:42 15 works. So I was willing initially to  
16:33:45 16 accept the fact that this sample was  
16:33:47 17 received at 9 a.m., roughly, in the  
16:33:51 18 morning of July 20th of '06. That's a  
16:33:56 19 blatant error in the chain of custody  
16:33:58 20 or receipt of this -- of this specimen,  
16:34:01 21 or pack of specimens.

16:34:02 22 I agree it could also be  
16:34:06 23 interpreted as 9 p.m., but as written  
16:34:11 24 in this form and consistent with the  
16:34:13 25 other documents from LNDD this does

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16:34:16 2 infer that it's 9 a.m. and not 9 p.m.

16:34:19 3 The related issue is on the

16:34:25 4 same USADA 24, item B, where this

16:34:31 5 package was transported to LNDD by

16:34:36 6 Simonetti, I agree at least based on

16:34:43 7 this document and what Dr. Ayotte

16:34:45 8 states, is that this package was

16:34:48 9 delivered by hand. Now, stage 17 I

16:34:52 10 believe is when the sample was

16:34:54 11 collected, was nowhere near the

16:34:56 12 laboratory. The sample had to be

16:34:59 13 transported by air I'm assuming, by

16:35:03 14 helicopter or by plane. So I have no

16:35:06 15 documentation on how this sample or

16:35:11 16 packages, package of samples was

16:35:14 17 transported and delivered to LNDD.

16:35:21 18 I agree with Dr. Ayotte that

16:35:23 19 perhaps an air bill is not applicable

16:35:25 20 in this sense because it wasn't shipped

16:35:28 21 by DHL or Fed Ex, but rather this was

16:35:31 22 transported by Mr. or Mrs., or Ms.

16:35:33 23 Simonetti. But to be honest, the

16:35:36 24 information is rather lacking.

16:35:40 25 Letter C pertains to USADA

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16:35:53 2 letter 6 and this is the worst  
16:35:55 3 reproduction of a custody document I've  
16:35:57 4 seen in my 25 years in the field of  
16:36:00 5 toxicology. I really can't make out  
16:36:03 6 the detail, but I would disagree that  
16:36:08 7 the RN is a representation of  
16:36:12 8 refrigerator 1. Upon initial review of  
16:36:16 9 this document I thought that was an  
16:36:19 10 abbreviation, or an initial of a  
16:36:21 11 technician or chemist with the initials  
16:36:23 12 of RN and not R1 for refrigerator. Now  
16:36:28 13 it makes some sense that it's  
16:36:32 14 refrigerator R1, but again, this  
16:36:36 15 demonstrates I'd say lack of attention  
16:36:38 16 to detail which encompasses every  
16:36:40 17 document I've seen so far.

16:36:43 18 MR. RIVKIN: Can I ask you a  
16:36:44 19 question about that. Look at the line  
16:36:47 20 just below where it says 22/15. Do you  
16:36:50 21 see that?

16:36:51 22 THE WITNESS: I do.

16:36:52 23 MR. RIVKIN: Doesn't the one  
16:36:53 24 there look just like the one after the  
16:36:55 25 R?

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16:36:56 2 THE WITNESS: Well, I'm no  
16:36:57 3 expert in handwriting analysis, but I  
16:36:59 4 would say no, it does not. Because the  
16:37:03 5 RN looks much like an N I might draw,  
16:37:07 6 but the 22/15 has a hook going up and  
16:37:15 7 then down which is the European way to  
16:37:18 8 draw a number 1. But the N above that,  
16:37:21 9 or the 1 above that is sloppy and could  
16:37:26 10 lead to misinterpretation.

16:37:31 11 MR. RIVKIN: You're not  
16:37:32 12 arguing the sloppy handwriting is a  
16:37:34 13 chain of custody violation?

16:37:36 14 THE WITNESS: Well, there  
16:37:37 15 are some issues with Landis' sample,  
16:37:41 16 the 474 if we could look at USADA 24.

16:37:49 17 MR. RIVKIN: I'm saying as a  
16:37:50 18 general matter you're not arguing that  
16:37:52 19 sloppy handwriting is a chain of  
16:37:54 20 custody violation?

16:37:55 21 THE WITNESS: It can be a  
16:37:56 22 major impact on chain of custody.  
16:37:59 23 Chain of custody is an integral process  
16:38:03 24 to ensure the evidentiary value of  
16:38:05 25 evidence. Paper or otherwise. And if

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16:38:08 2 there is sloppy technique associated  
16:38:11 3 with the use of chain of custody, then  
16:38:14 4 the evidential value of a sample may be  
16:38:17 5 in dispute. And there's so many  
16:38:19 6 issues, but chain of custody is  
16:38:21 7 integral to the process in any forensic  
16:38:26 8 laboratory, be it doing DNA work,  
16:38:29 9 toxicology work or firearms, for  
16:38:31 10 example. Chain of custody is integral.

16:38:34 11 But you'll see that the 474,  
16:38:40 12 it's a little hard to see on the screen  
16:38:42 13 here, but to me it looks more like a  
16:38:45 14 476. And if you see where I think it  
16:38:49 15 says 476, that 6 at the end looks a lot  
16:38:55 16 like the 6 in the next row. I admit  
16:38:59 17 I'm not a handwriting expert, but just  
16:39:01 18 my eye would suggest that those are two  
16:39:06 19 sixes and not a 4 and a 6.

16:39:08 20 Now, I'll move on for sake  
16:39:12 21 of time. Items D through E were taken  
16:39:17 22 out of context. If my declaration was  
16:39:21 23 read perhaps more carefully, the issues  
16:39:25 24 would be more clear to Dr. Ayotte. My  
16:39:29 25 issue is the use of chain of custody by

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16:39:36 2 LNDD is not in compliance with WADA  
16:39:42 3 technical document TD2003LCOC. It's  
16:39:47 4 pretty clear to me what LCOC requires.  
16:39:50 5 It's a continuous record of individuals  
16:39:53 6 in the possession of the samples should  
16:40:00 7 be documented when it's placed into and  
16:40:02 8 taken out of the controlled zone. And  
16:40:11 9 the laboratory internal chain of  
16:40:13 10 custody must contain the name or  
16:40:15 11 initials of the individual, date of  
16:40:17 12 transfer and the purpose of the  
16:40:19 13 transfer or possession.

16:40:20 14 I'm reading straight from  
16:40:21 15 the technical document. I think it's  
16:40:23 16 clear. Every entry pertaining to chain  
16:40:26 17 of custody must include the name and/or  
16:40:29 18 -- name or initials, the date and the  
16:40:31 19 purpose. A signature sheet associated  
16:40:35 20 with someone's initials is very  
16:40:39 21 important and I employ that in my  
16:40:40 22 laboratory because my analysts use  
16:40:43 23 initials as well. We don't use numbers  
16:40:45 24 though. The number doesn't provide the  
16:40:51 25 same evidential information as

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16:40:53 2 initials. As we see already there are  
16:40:56 3 issue with the way the numbers are  
16:40:57 4 written. But I'd say there are no  
16:40:59 5 issues with the way that the signatures  
16:41:02 6 are displayed or the initials are  
16:41:04 7 provided on the paperwork.

16:41:05 8 So clearly I think the  
16:41:08 9 technical document is obvious that  
16:41:13 10 names or initials, date and purpose of  
16:41:15 11 transfer.

16:41:16 12 The lab does comply with the  
16:41:19 13 final statement there that there is a  
16:41:21 14 complete signature in the documentation  
16:41:24 15 package.

16:41:25 16 So I think that addresses  
16:41:28 17 the specific issues from Dr. Ayotte  
16:41:30 18 that are noted in paragraph 39 of my  
16:41:33 19 declaration package.

16:41:34 20 MR. PAULSSON: What difference  
16:41:36 21 would it make if it were true that in  
16:41:38 22 fact 9:35 means morning?

16:41:43 23 THE WITNESS: Well, we know  
16:41:45 24 that's not possible. But maybe it is.  
16:41:47 25 I'm independent of this process. And



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16:41:51 2 the reason why experts like myself ask  
16:41:54 3 for documentation packages is so we can  
16:41:56 4 assist the athlete, the accused, to be  
16:42:00 5 sure that this evidence is what it is  
16:42:05 6 or what it's been stated to be.

16:42:07 7 And to have an error as  
16:42:13 8 egregious as that is a problem. I've  
16:42:15 9 noted others too. But that's clear,  
16:42:18 10 clearly a mistake.

16:42:22 11 MR. PAULSSON: Have you  
16:42:23 12 noted any other place except right here  
16:42:25 13 at paragraph 39 where it is contended  
16:42:31 14 that 9:35 means p.m.?

16:42:39 15 THE WITNESS: My recollection  
16:42:40 16 through the document package is that they  
16:42:41 17 use a variety of clocks or notations.  
16:42:45 18 One is like this which is 9 hours and so  
16:42:48 19 many minutes. We can look at that  
16:42:50 20 notation on LNDD 1591 where number 19  
16:43:01 21 used that same clock, 9 hours and 10  
16:43:03 22 minutes. I believe there's other  
16:43:07 23 instances where the 24 hour clock has  
16:43:09 24 been used.

16:43:10 25 MR. PAULSSON: My question

1 BRUCE GOLDBERGER - DIRECT

16:43:11 2 was if you've seen any other --

16:43:15 3 THE WITNESS: Mistakes?

16:43:17 4 MR. PAULSSON: No,

16:43:18 5 contention that 9:35 means 9:35 p.m.?

16:43:23 6 THE WITNESS: No.

16:43:25 7 MR. PAULSSON: Okay.

16:43:29 8 THE PRESIDENT: Please

16:43:30 9 continue. Do you have any more

16:43:31 10 comments on Dr. Ayotte that you wanted

16:43:33 11 to make?

16:43:34 12 THE WITNESS: No, those are

16:43:35 13 the specific comments. I think my

16:43:37 14 declaration stands on its own, but I

16:43:40 15 wanted to be sure that we clarified

16:43:42 16 those few points.

16:43:44 17 THE PRESIDENT: Thank you

16:43:46 18 very much. Any other questions for

16:43:48 19 examination in chief, Mr. Suh?

16:43:51 20 MR. SUH: Yes.

16:43:51 21 Q. Dr. Goldberger, just turn

16:43:54 22 your attention back to Page 18. I

16:43:56 23 believe you mentioned subparagraphs (a)

16:43:58 24 through (f). And I just want to make

16:44:00 25 sure that you had the opportunity to

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16:44:02 2 comment on all the paragraphs listed  
16:44:08 3 there.

16:44:10 4 A. Yes. I think maybe it's  
16:44:12 5 important to stress that (d) through  
16:44:14 6 (e) pertains to the specific violation  
16:44:18 7 or noncompliance with the technical  
16:44:21 8 document LCOC, and that in my opinion  
16:44:24 9 the use of numbers rather than initials  
16:44:26 10 is a blatant violation of LCOC.

16:44:32 11 Now, I think what Dr. Ayotte  
16:44:36 12 states is, you know, obviously,  
16:44:39 13 operator 19, this is in (f) did the  
16:44:43 14 test and his name is Garcia, I agree,  
16:44:45 15 that's clear. That's blatantly clear  
16:44:47 16 that the error is the use of the number  
16:44:49 17 19 representing Mr. Garcia.

16:45:03 18 MR. SUH: No further  
16:45:04 19 questions.

16:45:05 20 THE PRESIDENT: Mr. Young.

16:45:06 21 CROSS EXAMINATION

16:45:12 22 BY MR. YOUNG:

16:45:12 23 Q. Dr. Goldberger, I'm not  
16:45:18 24 going to ask you a lot about the  
16:45:24 25 testosterone and epitestosterone part

1 BRUCE GOLDBERGER - CROSS

16:45:27 2 of your declaration, but am I clear  
16:45:35 3 that your laboratory doesn't analyze  
16:45:37 4 samples for testosterone and  
16:45:39 5 epitestosterone, that you send those  
16:45:41 6 out to a specialized lab?

16:45:42 7 A. Yes, that's the case. If we  
16:45:45 8 have a request for anabolic steroids,  
16:45:47 9 that's sent to a reference lab.

16:45:50 10 Q. You do GC/MS on other  
16:45:53 11 substances like the five drugs of  
16:45:55 12 abuse, correct?

16:45:57 13 A. In my laboratory we conduct  
16:45:59 14 GC/MS tests on many more than five  
16:46:01 15 drugs of abuse. We use GC/MS  
16:46:05 16 extensively and I have for about 20  
16:46:07 17 years.

16:46:07 18 Q. How many times have your  
16:46:12 19 GC/MS results been challenged?

16:46:14 20 A. Oh, I've given I believe  
16:46:16 21 over 300 depositions and I've testified  
16:46:18 22 about 150 times and a fair number of  
16:46:21 23 those cases I'm challenged on a regular  
16:46:23 24 basis. Just yesterday I shipped a  
16:46:26 25 document package to an attorney in a

1 BRUCE GOLDBERGER - CROSS

16:46:30 2 DUI case. She's a private criminal  
16:46:34 3 attorney and I provided to her a full  
16:46:36 4 documentation package.

16:46:37 5 Q. And in all of those hundreds  
16:46:40 6 of cases have you ever been asked to  
16:46:42 7 produce electronic data files?

16:46:45 8 A. No.

16:46:47 9 Q. You've never voluntarily  
16:46:49 10 turned over electronic data files?

16:46:51 11 A. No. But they're available.

16:46:53 12 Q. Let's talk about the  
16:47:02 13 accreditation of your laboratory. It's  
16:47:07 14 not ISO accredited, right?

16:47:08 15 A. No, it's not.

16:47:09 16 Q. And you've never worked  
16:47:12 17 under an ISO accredited laboratory in  
16:47:14 18 your life, right?

16:47:15 19 A. That's correct.

16:47:17 20 Q. And it's not WADA  
16:47:20 21 accredited?

16:47:22 22 A. No, they wouldn't accredit  
16:47:25 23 my laboratory.

16:47:26 24 Q. And has any laboratory  
16:47:32 25 you've ever worked ever been subject to

1 BRUCE GOLDBERGER - CROSS

16:47:36 2 the rules of the International Standard  
16:47:42 3 for Laboratories?

16:47:42 4 A. No.

16:47:42 5 Q. And on ISO -- you've never  
16:47:48 6 been involved in your life in an ISO  
16:47:50 7 audit, have you?

16:47:51 8 A. No.

16:47:52 9 Q. There is an accreditation  
16:47:58 10 body called the American Board of  
16:48:03 11 Forensic Toxicologists. Is your  
16:48:03 12 laboratory accredited by them?

16:48:06 13 A. We are in the process of  
16:48:07 14 submitting an application to the  
16:48:09 15 American Board of Forensic Toxicology.

16:48:12 16 Q. But you're not accredited  
16:48:13 17 now?

16:48:13 18 A. We're not.

16:48:14 19 Q. And there's a body called  
16:48:15 20 the American Society of Criminal Lab  
16:48:17 21 Directors.

16:48:18 22 A. Crime Lab.

16:48:20 23 Q. Crime Lab Directors. Thank  
16:48:21 24 you. And are you accredited by them?

16:48:23 25 A. No, they would not accredit

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16:48:25 2 my laboratory.

16:48:26 3 Q. And then there's SAMHSA, the  
16:48:29 4 Substance Abuse and Mental Health  
16:48:32 5 Services Administration?

16:48:32 6 A. Yes.

16:48:32 7 Q. Is your laboratory  
16:48:33 8 accredited by them?

16:48:34 9 A. No. But I worked at a  
16:48:36 10 laboratory that was one of the first 15  
16:48:39 11 or 20 certified by SAMHSA in the  
16:48:43 12 mid-1980s.

16:48:43 13 Q. But you're not accredited  
16:48:45 14 now?

16:48:45 15 A. No, they would not certify  
16:48:47 16 my laboratory.

16:48:48 17 Q. And then --

16:48:51 18 MR. RIVKIN: Sorry, you've  
16:48:52 19 answered a couple of questions they  
16:48:53 20 would not certify. Does that mean in  
16:48:55 21 each of those cases you applied for  
16:48:58 22 certification, from WADA, from these  
16:49:00 23 other two certifications and they did  
16:49:02 24 not?

16:49:02 25 THE WITNESS: No, the work

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16:49:03 2 that I did in my laboratory is outside  
16:49:05 3 the scope of those groups. The work  
16:49:07 4 that I do is postmortem drug testing as  
16:49:09 5 well as human performance drug testing,  
16:49:12 6 DUI testing.

16:49:13 7 MR. RIVKIN: That's what you  
16:49:14 8 meant by would not, okay, thank you.

16:49:17 9 THE WITNESS: Correct.

16:49:18 10 Q. I think in your earlier  
16:49:29 11 testimony you did say that your  
16:49:30 12 laboratory was accredited by the  
16:49:32 13 College of American Pathologists?

16:49:33 14 A. That is correct.

16:49:35 15 Q. But when I go online and  
16:49:36 16 look under the college of American  
16:49:41 17 pathologists for forensic urine drug  
16:49:43 18 testing your laboratory is not listed.  
16:49:45 19 Why would that be?

16:49:46 20 A. Because I'm not a forensic  
16:49:48 21 urine drug testing laboratory. I'm  
16:49:50 22 accredited under a different program.

16:49:53 23 Q. And the part of the program  
16:49:57 24 that you're talking about where you've  
16:50:00 25 given evidence in all these cases, that



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16:50:03 2 is forensic urine drug testing, right?

16:50:05 3 A. No, it's postmortem drug  
16:50:08 4 testing.

16:50:08 5 Q. On dead people?

16:50:10 6 A. The majority of the work  
16:50:12 7 that I do is on dead people as well as  
16:50:14 8 some human performance toxicology which  
16:50:16 9 is people driving, say, a motor vehicle  
16:50:21 10 while under the influence of a drug.

16:50:22 11 Q. And that would be under  
16:50:24 12 forensic urine drug testing?

16:50:26 13 A. No, sir. That's testing  
16:50:28 14 that's done to maintain a drug-free  
16:50:31 15 work place and that's not the type of  
16:50:33 16 work that I presently do. That's why  
16:50:35 17 it's a different program that you  
16:50:37 18 looked at on the CAP website.

16:50:46 19 Q. You've rendered a number of  
16:50:48 20 opinions on the International Standard  
16:50:50 21 for Laboratories. So we've confirmed  
16:50:56 22 you're not accredited under the ISO,  
16:50:59 23 right.

16:50:59 24 A. Correct.

16:51:00 25 Q. You've never been audited

1 BRUCE GOLDBERGER - CROSS

16:51:01 2 under the ISO?

16:51:02 3 A. Correct.

16:51:02 4 Q. You've never audited anybody  
16:51:04 5 else under the ISO?

16:51:06 6 A. Correct.

16:51:10 7 Q. You weren't involved in  
16:51:11 8 either drafting or reviewing the ISO?

16:51:13 9 A. Correct.

16:51:17 10 Q. And before this case nobody  
16:51:18 11 had ever asked your opinion on how to  
16:51:20 12 interpret a particular provision of the  
16:51:22 13 ISO?

16:51:23 14 A. That's correct.

16:51:30 15 Q. Could you look at Page 30 of  
16:51:35 16 your declaration. Do you have that  
16:52:03 17 with you?

16:52:03 18 A. Yes, I'm not sure my Page 30  
16:52:05 19 is the same as this Page 30.

16:52:06 20 Q. It's not Page 30, it's  
16:52:08 21 paragraph 30. It's at Page 8. I'm  
16:52:10 22 sorry, my mistake.

16:52:19 23 A. I have that.

16:52:19 24 Q. I'm just interested in the  
16:52:21 25 first sentence, "An example of a proper

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16:52:24 2 chain of custody documentation is found  
16:52:25 3 by looking at the chain of custody  
16:52:27 4 documentation used at the UCLA  
16:52:30 5 laboratory," and then you give Exhibit  
16:52:34 6 30 through 31, GDC Exhibit 30 through  
16:52:38 7 31. And the Montreal laboratory,  
16:52:43 8 Exhibit GDC 32 and 33.

16:52:58 9 A. I have copies.

16:53:33 10 Q. As far as the UCLA documents,  
16:53:37 11 I take it you got it backwards in your  
16:53:40 12 declaration, that UCLA is really 32 and  
16:53:46 13 33 and Montreal is really 30 and 31; is  
16:53:55 14 that right?

16:53:55 15 A. Yes, you're correct.

16:54:07 16 Q. So let's talk about the UCLA  
16:54:11 17 chain of custody which you describe as  
16:54:13 18 a proper chain of custody. This is an  
16:54:16 19 A bottle chain of custody, right?

16:54:19 20 A. It is. We're looking at 32.

16:54:25 21 Q. I'm looking at 33.

16:54:29 22 A. 33 also.

16:54:30 23 Q. And what you see is that the  
16:54:36 24 bottle goes from freezer 15 to Ms.  
16:54:43 25 Delshad, right?

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16:54:46 2 A. Yes.

16:54:47 3 Q. And it goes there on May

16:54:49 4 31st of 2005, right?

16:54:57 5 A. Yes.

16:54:57 6 Q. What time of day did it go

16:54:58 7 there?

16:54:59 8 A. It doesn't state.

16:55:01 9 Q. Isn't that required in your

16:55:02 10 opinion?

16:55:03 11 A. No, I didn't say that.

16:55:04 12 Q. So you don't need to have

16:55:10 13 time of day in chain of custody?

16:55:11 14 A. You don't need -- it's not

16:55:13 15 required to have the time. If you have

16:55:14 16 the time be sure it's right. So I'm --

16:55:19 17 I want to be clear. If you have the

16:55:21 18 time it must be, it's obligatory that

16:55:24 19 it's correct. But if you don't have

16:55:26 20 the time so be it. And I realize UCLA

16:55:30 21 doesn't have the time.

16:55:30 22 Q. And then under purpose is

16:55:34 23 aliquot confirmation. Do you know

16:55:38 24 where that took place, what room?

16:55:41 25 A. No.

1 BRUCE GOLDBERGER - CROSS

16:55:42 2 Q. And then it goes back to a  
16:55:53 3 positive freezer; is that right?

16:55:56 4 A. That's right. This sample  
16:55:59 5 was removed from freezer number 15, so  
16:56:01 6 an aliquot could be removed for  
16:56:04 7 confirmation and then that specimen was  
16:56:07 8 returned to positive freezer number 2.

16:56:12 9 Q. And do you know when it was  
16:56:13 10 returned?

16:56:13 11 A. On May 31, 2005.

16:56:16 12 Q. But we don't know what time?

16:56:17 13 A. No.

16:56:18 14 Q. So we don't know whether it  
16:56:21 15 went out in the morning, a.m. or p.m.?

16:56:24 16 A. No, we don't.

16:56:25 17 Q. And we don't know whether it  
16:56:27 18 went back in the morning or afternoon  
16:56:29 19 either, do we?

16:56:30 20 A. We don't.

16:56:32 21 Q. All we know is that Delshad  
16:56:37 22 had it for some period of time?

16:56:39 23 A. Correct.

16:56:41 24 Q. And do you know whether  
16:56:42 25 Delshad had it in a controlled that

1 BRUCE GOLDBERGER - CROSS

16:56:46 2 whole time or where Delshad might have  
16:56:48 3 gone with it?

16:56:54 4 A. No.

16:56:55 5 Q. Do you know whether Delshad  
16:56:57 6 went to the bathroom or had lunch  
16:57:00 7 during the period of time?

16:57:03 8 A. That's a great question.  
16:57:05 9 No. If there's evidence that he or she  
16:57:08 10 left the specimen on a bench even in a  
16:57:11 11 controlled zone for an extended period  
16:57:13 12 of time, I'd have an issue with that.

16:57:16 13 Q. But there's no evidence  
16:57:19 14 whether this is in a controlled zone or  
16:57:21 15 not?

16:57:21 16 A. No, no, no. But you brought  
16:57:22 17 the issue up. So I just replied.

16:57:24 18 Q. And in this chain of custody  
16:57:26 19 that you call a proper chain of  
16:57:28 20 custody, you don't know how long he had  
16:57:30 21 it, and you don't know whether it was a  
16:57:33 22 controlled zone and you don't know  
16:57:34 23 where any of this occurred?

16:57:36 24 A. I don't. I might have the  
16:57:39 25 same issues if I was ever asked to

1 BRUCE GOLDBERGER - CROSS

16:57:40 2 review a package from UCLA.

16:57:42 3 Q. Well you called this a  
16:57:43 4 proper chain of custody?

16:57:45 5 A. That's right. It has a  
16:57:49 6 name, printed name as well as a  
16:57:50 7 signature, it's got a date and purpose.

16:57:53 8 Q. Okay, let's go to number 32.  
16:58:03 9 And in this case, it goes from Delshad  
16:58:08 10 to refrigerator number 12 on May 31st.  
16:58:16 11 And the purpose is storage. We don't  
16:58:20 12 know when Delshad put it in that  
16:58:22 13 refrigerator, do we?

16:58:23 14 A. No.

16:58:25 15 Q. And then it's taken out by  
16:58:29 16 Annabella Leung, but we don't know when  
16:58:39 17 she took it out, do we?

16:58:40 18 A. I don't. Now it might be,  
16:58:42 19 I'm sorry to interrupt you, that  
16:58:44 20 there's a separate extraction log, a  
16:58:52 21 document that shows the time when this  
16:58:54 22 test was initiated or completed. Of  
16:58:56 23 course I don't know if that's a fact or  
16:58:58 24 not. Those documents aren't provided  
16:58:59 25 here.

1 BRUCE GOLDBERGER - CROSS

16:59:00 2 Q. It would be an assay  
16:59:01 3 document like the documents you've seen  
16:59:04 4 produced LNDD?

16:59:05 5 A. That's right.

16:59:11 6 Q. And sometime on May 31st she  
16:59:14 7 performs an assay. Do we know what  
16:59:15 8 assay?

16:59:16 9 A. No.

16:59:19 10 Q. Do we know where she  
16:59:20 11 performed the assay?

16:59:21 12 A. No. Again, that may be on  
16:59:22 13 an assay-specific sheet.

16:59:25 14 Q. So this proper chain of  
16:59:29 15 custody log isn't looking so proper, is  
16:59:32 16 that what you're telling me?

16:59:33 17 A. No, no. Simply these are  
16:59:36 18 examples of the proper use of names or  
16:59:39 19 initials, date of transfer and the  
16:59:42 20 purpose of possession. The other  
16:59:45 21 information that you're asking about is  
16:59:47 22 obviously outside of my purview. But  
16:59:50 23 would be included on additional assay  
16:59:53 24 batch sheets.

16:59:54 25 Q. But you're saying it's not



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16:59:56 2 required?

16:59:57 3 A. It's not required on this  
17:00:00 4 chain of custody. I would -- I would  
17:00:03 5 also suggest that we have -- we may  
17:00:07 6 have some same issues with the Montreal  
17:00:10 7 sheets because there's only two  
17:00:12 8 Montreal sheets in here from a batch.  
17:00:16 9 There are additional pages that  
17:00:17 10 accompany document package from  
17:00:20 11 Dr. Ayotte's laboratory. These are  
17:00:22 12 only used as an example in total  
17:00:24 13 isolation.

17:00:25 14 Q. So let me go back. You  
17:00:31 15 called this UCLA chain of custody a  
17:00:33 16 "proper chain of custody documentation  
17:00:35 17 as found by looking at the custody  
17:00:37 18 documentation used by UCLA."

17:00:40 19 A. Yes. This is -- for the  
17:00:41 20 panel, this is the same chain of  
17:00:43 21 custody form that's been used in USADA  
17:00:46 22 prosecutions, if I may say, so you may  
17:00:48 23 have greater, more accurate numbers  
17:00:50 24 than I do, but UCLA is WADA, it's an  
17:00:57 25 accredited laboratory, state-of-the-art

1 BRUCE GOLDBERGER - CROSS

17:00:59 2 recognized laboratory and these are  
17:01:01 3 examples from that laboratory, a lab  
17:01:03 4 that your client uses.

17:01:18 5 Q. That's right. And when you  
17:01:19 6 say -- when you look at the -- it goes  
17:01:24 7 from Annabella Leung to temporary  
17:01:26 8 storage to Heith, to the auto sampler  
17:01:30 9 and then to then storage all on May  
17:01:37 10 31st. You don't know how long  
17:01:45 11 Annabella had this sample or how long  
17:01:48 12 it was in the first temporary storage,  
17:01:51 13 or how long Heith had this sample, do  
17:01:54 14 you?

17:01:54 15 A. No, but it's comforting that  
17:01:55 16 they made note of when the sample was  
17:01:57 17 placed into storage while it was in the  
17:02:00 18 controlled zone of the laboratory.

17:02:06 19 Q. How do you know that NAS  
17:02:10 20 temporary storage is in the controlled  
17:02:12 21 zone or analysis, then storage is in  
17:02:14 22 the controlled zone?

17:02:15 23 A. Well, specimens and samples  
17:02:18 24 derived from specimens such as aliquots  
17:02:20 25 and the work that's done in a

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17:02:22 2 laboratory is all done within the  
17:02:23 3 controlled zone and not in the lobby of  
17:02:27 4 the UCLA drug testing laboratory.

17:02:29 5 Q. So you know that, you know  
17:02:31 6 that if a laboratory is moving samples  
17:02:35 7 between storage and their analysis then  
17:02:38 8 of course it would be in a controlled  
17:02:42 9 zone?

17:02:42 10 A. Yes. They are an accredited  
17:02:49 11 laboratory.

17:02:59 12 Q. So we should trust the  
17:03:00 13 accreditation then on the custody of  
17:03:04 14 samples within the lab?

17:03:07 15 A. It's useful. It's not all  
17:03:10 16 inclusive, but it is useful. It's well  
17:03:15 17 known that even accredited laboratories  
17:03:19 18 make disastrous mistakes.

17:03:21 19 Q. You're familiar with the  
17:03:33 20 chain of custody documentation  
17:03:39 21 requirements from other organizations  
17:03:42 22 like ILAC, which is the International  
17:03:56 23 Laboratory Accredited Cooperation?

17:03:56 24 A. No, never heard of that  
17:03:57 25 group.

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17:03:57 2 Q. You've never heard of ILAC?

17:03:59 3 A. No.

17:03:59 4 Q. So you've never looked at  
17:04:06 5 their guidelines for forensic science  
17:04:08 6 laboratories then?

17:04:09 7 A. No.

17:04:10 8 Q. You've heard of ISO 17025?

17:04:17 9 A. That's correct, as a matter  
17:04:19 10 of fact, with the American Board of  
17:04:21 11 Toxicology we're beginning to study the  
17:04:25 12 incorporation of those ISO guidelines  
17:04:27 13 into the accreditation of postmortem  
17:04:30 14 toxicology laboratories. So I would  
17:04:32 15 say if I'm successful in achieving  
17:04:34 16 certification of my lab, I'll begin to  
17:04:37 17 incorporate many of the same features  
17:04:40 18 that we see in the ISO document. Most  
17:04:46 19 applicably is the measurement of  
17:04:47 20 uncertainty.

17:04:48 21 Q. Have you looked at the chain  
17:04:50 22 of custody provision in ISO 17025?

17:04:55 23 A. I had previously, yes.

17:04:57 24 Q. Let's take a look at it.

17:04:59 25 It's Exhibit 23, Page USADA 1273. And

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17:05:11 2 I'm interested in paragraph 5.82. I'll  
17:05:18 3 give you a second to read it. Have you  
17:05:29 4 read it?

17:05:30 5 A. Give me a second.

17:05:31 6 Q. Okay. Tell me when you're  
17:05:33 7 ready.

17:05:41 8 A. Yes, this is one purpose of  
17:05:42 9 a chain of custody. Chain of custody  
17:05:45 10 not only is used to say a sample hasn't  
17:05:50 11 been tampered with, but it also does  
17:05:54 12 support the fact that you can't confuse  
17:05:55 13 samples either.

17:05:57 14 Q. Is there anything else in  
17:05:59 15 this ISO document that addresses chain  
17:06:04 16 of custody that you're aware of?

17:06:07 17 A. No. You know, the ISO  
17:06:10 18 document only provides I'd say that the  
17:06:13 19 base from what we work from, from the  
17:06:16 20 ISO document we now have WADA technical  
17:06:20 21 documents, for example. And from there  
17:06:23 22 you have a laboratory SOP. So we work  
17:06:26 23 from the base through to the point  
17:06:29 24 where we have SOPs that specifically  
17:06:35 25 say how a sample in this case would be

1 BRUCE GOLDBERGER - CROSS

17:06:37 2 treated.

17:06:37 3 Q. So to make sure I understand  
17:06:38 4 your testimony, if one were to be  
17:06:43 5 compliant with the ISO document, it  
17:06:46 6 would be sufficient if you listed the  
17:06:50 7 date, a sample move from one person to  
17:06:55 8 another, and you didn't list the time,  
17:06:59 9 correct?

17:06:59 10 A. Yes. I said time wasn't an  
17:07:02 11 issue.

17:07:02 12 Q. And you wouldn't have to  
17:07:03 13 list the location?

17:07:05 14 A. I'm reading 5.8.1, you might  
17:07:15 15 not want to miss that. "The laboratory  
17:07:19 16 shall have processes for the  
17:07:21 17 transportation, receipt, handling,  
17:07:23 18 protection, storage, retention and  
17:07:25 19 disposal of tests and/or calibration  
17:07:28 20 items including provisions necessary to  
17:07:30 21 protect the integrity of the test or  
17:07:32 22 calibration item and to protect the  
17:07:34 23 interests of the laboratory and the  
17:07:36 24 client." Isn't that what a chain of  
17:07:39 25 custody does?

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17:07:40 2 Q. Sure.

17:07:41 3 A. That's the mission or vision  
17:07:42 4 of a chain of custody. That's the  
17:07:44 5 basis for a chain of custody.

17:07:45 6 Q. But I'm talking about any  
17:07:47 7 specific -- and as a general  
17:07:48 8 proposition, that's fine. I'm talking  
17:07:51 9 about a specific requirement. Is there  
17:07:55 10 any specific requirement about  
17:07:56 11 location?

17:07:56 12 A. No. But that's not what  
17:07:58 13 ISO's about. ISO defines the program,  
17:08:03 14 the base for the program. I would say  
17:08:06 15 that if this is all you used in your  
17:08:09 16 laboratory and you didn't have your  
17:08:11 17 technical documents, you wouldn't have  
17:08:14 18 a program. And that's why you have  
17:08:18 19 people who audit laboratories.

17:08:21 20 Q. And they audit under ISO and  
17:08:25 21 they also audit under the ISL, correct?

17:08:30 22 A. Yes.

17:08:31 23 Q. And have you read the audit  
17:08:38 24 done by COFRAC?

17:08:40 25 A. Yes.

1 BRUCE GOLDBERGER - CROSS

17:08:40 2 Q. And they audited under  
17:08:45 3 technical document 2003 LCOC, correct?

17:08:51 4 A. Yes. And they made a  
17:08:54 5 mistake.

17:08:56 6 Q. And the mistake was the 20  
17:08:58 7 percent?

17:08:59 8 A. Well, that's a reminder,  
17:09:02 9 yes, they made that mistake and also  
17:09:05 10 not noting the complete methodology  
17:09:07 11 used for the IRMS procedure.

17:09:10 12 Q. The M-AN-52?

17:09:11 13 A. Yes. But their  
17:09:14 14 interpretation of LCOC is flawed.

17:09:19 15 Q. Okay. Did you ever talk to  
17:09:29 16 Dr. de Boer about what he saw when he  
17:09:31 17 was in the Paris lab for three days?

17:09:33 18 A. No.

17:09:35 19 Q. So you didn't learn from him  
17:09:38 20 that the whole operating part of the  
17:09:40 21 lab was a controlled area?

17:09:42 22 A. No. I saw your figure  
17:09:49 23 today.

17:09:49 24 Q. Do you have any reason to  
17:09:50 25 doubt that?



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17:09:51 2 A. But I have an issue with  
17:09:52 3 that, because visitors to the  
17:09:53 4 laboratory enter that zone. As they  
17:09:58 5 enter the zone in my laboratory too.  
17:10:00 6 So again, the importance of the chain  
17:10:05 7 of custody is significant.

17:10:08 8 Q. If you go back to the map  
17:10:11 9 visitors don't enter that zone,  
17:10:13 10 visitors enter the reception area. Do  
17:10:15 11 we have a misunderstanding?

17:10:16 12 A. Mr. Davis, right, told me  
17:10:19 13 that he was in the zone.

17:10:23 14 Q. We can ask Dr. Davis about  
17:10:26 15 that.

17:10:26 16 A. Yes.

17:10:27 17 Q. To make sure I understand --

17:10:40 18 A. But wait, wait. Just so we  
17:10:42 19 don't forget this, how about the people  
17:10:44 20 that repaired the equipment. They must  
17:10:46 21 enter the zone because your IRMS  
17:10:51 22 instrument can't be taken out of the  
17:10:52 23 zone to be repaired and then placed  
17:10:54 24 back in the zone. So there are people  
17:10:56 25 who are non-laboratory employees that

1 BRUCE GOLDBERGER - CROSS

17:11:00 2 enter the zone.

17:11:04 3 Q. That's right, and the ISL

17:11:06 4 has a specific description for

17:11:08 5 controlled areas that says those people

17:11:12 6 must sign in and be escorted?

17:11:14 7 A. That's right.

17:11:15 8 Q. Do you want me to point out

17:11:17 9 the section of the ISL?

17:11:19 10 A. No, I'm just using that as

17:11:22 11 an example of why we use chain of

17:11:23 12 custody, that is so people don't tamper

17:11:27 13 with samples.

17:11:28 14 Q. If somebody is signed in and

17:11:31 15 escorted how are they going to tamper

17:11:33 16 with a sample?

17:11:34 17 A. There's a example of a case

17:11:37 18 in the military from years ago where a

17:11:39 19 military defense lawyer was admitted or

17:11:41 20 allowed to enter a US military drug

17:11:43 21 testing laboratory and through his

17:11:46 22 travels through the lab he picked up an

17:11:48 23 auto sample vial and walked out with

17:11:51 24 it. So at the court martial he pulled

17:11:53 25 it out of his pocket when talking about

1 BRUCE GOLDBERGER - CROSS

17:11:55 2 chain of custody and suggested that the  
17:11:59 3 laboratory lost something. So that was  
17:12:02 4 clearly a violation of the security as  
17:12:05 5 well as chain of custody.

17:12:15 6 Q. Am I correct it's your  
17:12:17 7 opinion, and I think I got this right  
17:12:18 8 from your declaration, when an analyst  
17:12:21 9 is sitting there in a 10 by 10 room  
17:12:28 10 with a sample in front of her on the  
17:12:30 11 bench, the bottle, and she's working on  
17:12:33 12 an aliquot, that she has custody of  
17:12:41 13 that bottle?

17:12:42 14 A. I would agree, but there's  
17:12:43 15 times where she or he may need to take  
17:12:46 16 a break to use the bathroom, to eat, to  
17:12:49 17 get a drink of water, speak to a  
17:12:51 18 supervisor, and at those times there  
17:12:57 19 could be issues with chain of custody.

17:12:59 20 Q. Well let's see what's  
17:13:01 21 supposed to happen. So I'm a  
17:13:02 22 technician. I'm in a secured area of  
17:13:08 23 the lab where, as defined by the ISL,  
17:13:14 24 where only technicians and escorted  
17:13:16 25 people can go, and I have the bottle in

1 BRUCE GOLDBERGER - CROSS

17:13:19 2 front of me on my bench, and I go to  
17:13:22 3 the bathroom. Are you saying that I  
17:13:26 4 need to fill out some document when I  
17:13:30 5 go to the bathroom and when I come back  
17:13:32 6 from the bathroom?

17:13:34 7 A. Maybe, maybe not. But some  
17:13:36 8 laboratories what they'll do with their  
17:13:39 9 extracts or the samples is place them  
17:13:40 10 into a temporary storage locker in the  
17:13:43 11 laboratory while they're not in full  
17:13:47 12 custody of the sample.

17:13:48 13 Q. Yes, but that's not required  
17:13:50 14 by either the ISL or the technical  
17:13:54 15 document, is it?

17:13:54 16 A. I would agree, no.

17:13:56 17 Q. You were talking about the  
17:14:05 18 quality of Page 006 as a horrible  
17:14:12 19 example of chain of custody. Did you  
17:14:14 20 ever ask for a better copy of 006?

17:14:16 21 A. No.

17:14:18 22 Q. And look for a minute at  
17:14:26 23 Page 26 of your -- paragraph 26 of your  
17:14:35 24 statement. The last six words "is a  
17:14:53 25 moral and ethical wrong." Was that

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17:14:55 2 your choice of words?

17:14:57 3 A. I assisted in the crafting  
17:14:59 4 of my declaration. I can't remember if  
17:15:03 5 these were some of the exact words that  
17:15:05 6 I used or my assistant's words.

17:15:11 7 Q. And your assistant is who?

17:15:12 8 A. Well, counsel, legal counsel  
17:15:14 9 for Floyd Landis.

17:15:21 10 MR. YOUNG: I have no  
17:15:23 11 further questions.

17:15:24 12 THE PRESIDENT: Mr. Suh.

17:15:26 13 REDIRECT EXAMINATION

17:15:29 14 BY MR. SUH:

17:15:29 15 Q. Dr. Goldberger, earlier you  
17:15:31 16 indicated that you believe that the  
17:15:34 17 lab's interpretation of LCOC is flawed.  
17:15:36 18 Could you explain what you meant by  
17:15:37 19 that?

17:15:37 20 A. Simply, again, reading  
17:15:43 21 pieces of the LCOC, one is that it's a  
17:15:48 22 continuous record of individuals in  
17:15:51 23 possession of the samples or sample  
17:15:53 24 aliquots. I admit there's a summary  
17:15:56 25 document of chain of custody. But

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17:16:01 2 there is no contemporaneous chain of  
17:16:03 3 custody form that I could find.

17:16:05 4 Second is documenting  
17:16:12 5 placement of a sample or aliquot into a  
17:16:15 6 controlled zone. And third is the  
17:16:23 7 chain of custody document must contain  
17:16:25 8 a name or initials of the individual,  
17:16:28 9 the date of transfer and the purpose of  
17:16:30 10 the transfer of possession.

17:16:33 11 Q. You've been asked some  
17:16:38 12 questions about your familiarity with  
17:16:40 13 the ISL. I think the implicit message  
17:16:47 14 is that you are not qualified to render  
17:16:51 15 an opinion about what the ISL means.  
17:16:53 16 Do you feel you're qualified to talk  
17:16:55 17 about the ISL?

17:16:56 18 A. Yes, I do.

17:16:58 19 Q. And why do you feel  
17:16:59 20 qualified?

17:17:00 21 A. I've been practicing  
17:17:02 22 toxicology for roughly 25 years, and have  
17:17:05 23 experience in a variety of arenas.  
17:17:10 24 Actually many years ago I actually was  
17:17:12 25 trained to be an inspector for the

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17:17:15 2 College of American Pathologists athletic  
17:17:19 3 drug testing, the accreditation program.  
17:17:21 4 I forget exactly what that was called.  
17:17:23 5 That program never really got off the  
17:17:25 6 ground. I think Dr. Bowers was involved  
17:17:27 7 with it. It was maybe one or two or  
17:17:29 8 three labs that were accredited and was  
17:17:32 9 losing large sums of money and the CAP  
17:17:35 10 discontinued that program. But I  
17:17:37 11 received training by CAP to be an  
17:17:40 12 inspector of a doping laboratory.

17:17:42 13 So I've been exposed to all  
17:17:45 14 areas of toxicology.

17:17:46 15 Now, my discussion of chain  
17:17:51 16 of custody is rudimentary to any  
17:17:54 17 practicing forensic scientist. And I  
17:17:57 18 use scientist in a general term. That  
17:17:59 19 may be from pathology to criminology --  
17:18:02 20 to criminalistics, to toxicology, to  
17:18:05 21 all areas of forensic science. The use  
17:18:08 22 of chain of custody is ubiquitous, it's  
17:18:12 23 everywhere, and the use of it and the  
17:18:13 24 application of it is straightforward.

17:18:15 25 Q. Is there anything

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17:18:16 2 particularly magical about the chain of  
17:18:18 3 custody principle you've seen set forth  
17:18:20 4 in the LCOC?

17:18:21 5 A. No, not at all.

17:18:23 6 Q. Are these principles that  
17:18:25 7 you're familiar with yourself in your  
17:18:26 8 practice at your laboratory?

17:18:27 9 A. Yes, we process more than  
17:18:30 10 3,000 cases per year and every one of  
17:18:32 11 those cases is received with  
17:18:34 12 appropriate chain of custody and that  
17:18:40 13 includes external chain of custodies,  
17:18:41 14 the shipping chain of custody as well  
17:18:44 15 as the internal chain of custody and  
17:18:46 16 batch chain of custody.

17:18:47 17 Q. Has your chain of custody  
17:18:50 18 procedures and your interpretation of  
17:18:51 19 what is proper chain of custody been in  
17:18:54 20 fact challenged before?

17:18:55 21 A. In many cases. These are  
17:18:57 22 criminal cases. The use of chain of  
17:19:01 23 custody is scrutinized by the smart  
17:19:05 24 attorneys. Some don't really ask those  
17:19:07 25 questions, but many times I've been



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17:19:09 2 asked exact questions about when it was  
17:19:11 3 received, who touched the sample, how  
17:19:15 4 was it processed. They scrutinize  
17:19:18 5 those documents and those names that  
17:19:21 6 appear on the custodies are people who  
17:19:25 7 will testify if necessary to support  
17:19:27 8 the evidence.

17:19:32 9 Q. Have there been any  
17:19:33 10 questions you've been asked today about  
17:19:35 11 your experience or about what occurred  
17:19:36 12 here which has caused you to change  
17:19:38 13 your opinion in the slightest about the  
17:19:40 14 chain of custody that you have seen  
17:19:42 15 with respect to sample A and sample B  
17:19:45 16 of sample 995474?

17:19:47 17 A. No.

17:19:48 18 Q. You have commented upon the  
17:19:49 19 need for initials, excuse me, or name  
17:19:59 20 under the LCOC and then commented upon  
17:20:01 21 the use of numbers. Is one of the  
17:20:03 22 issues about the use of numbers the  
17:20:05 23 very issue that brought the discussion  
17:20:07 24 between you and the panel earlier about  
17:20:10 25 an argument over -- not an argument,

1 BRUCE GOLDBERGER - REDIRECT

17:20:12 2 but a disagreement over what a number  
17:20:15 3 or letter would be?

17:20:17 4 A. Yes.

17:20:18 5 Q. And could you explain what  
17:20:19 6 you mean by your answer yes.

17:20:20 7 A. Well, the numbers can get  
17:20:22 8 confused. And even in the LNDD  
17:20:26 9 documents they admit that some numbers  
17:20:28 10 were confused or omitted. I think it's  
17:20:32 11 very clear when someone uses their  
17:20:34 12 initials what the intent of that is.  
17:20:38 13 So numbers get mixed, but initials are  
17:20:43 14 clear.

17:20:43 15 Q. And is that one of the  
17:20:45 16 reasons why when you had the discussion  
17:20:49 17 earlier with the panel about whether a  
17:20:56 18 number was a one or an N, do you  
17:20:59 19 believe that the initial or name would  
17:21:01 20 alleviate the issue of having to have  
17:21:03 21 that discussion in your experience?

17:21:06 22 A. Yes. Even better, bar  
17:21:08 23 coding.

17:21:11 24 Q. Let me ask you this. You  
17:21:14 25 were last asked about your declaration

1 BRUCE GOLDBERGER - REDIRECT

17:21:18 2 and its contents. Have you reviewed  
17:21:21 3 the contents of your declaration  
17:21:25 4 carefully?

17:21:25 5 A. Yes, very carefully.

17:21:27 6 Q. And how long did you spend  
17:21:32 7 reviewing the contents of your  
17:21:33 8 declaration?

17:21:34 9 A. I know in the initial  
17:21:35 10 preparation we spent a fair amount of  
17:21:38 11 time both obviously preparing for the  
17:21:39 12 first hearing and then for this  
17:21:41 13 hearing. But the review took hours of  
17:21:44 14 my time.

17:21:46 15 Q. And you were just asked  
17:21:48 16 about the comment in your declaration  
17:21:50 17 about there being a moral or ethical  
17:21:53 18 wrong about -- about your statement  
17:22:03 19 about there being an ethical or moral  
17:22:05 20 wrong about opposing adverse analytic  
17:22:09 21 findings in this case. Can you explain  
17:22:10 22 what you mean by that?

17:22:11 23 A. Actually it goes back to  
17:22:13 24 when you and Mr. Jacobs contacted me a  
17:22:17 25 year ago or more to review these

1 BRUCE GOLDBERGER - REDIRECT

17:22:22 2 documents, and it's well known to most  
17:22:24 3 of the people in this room that I was  
17:22:25 4 hesitant to get involved, but when I  
17:22:29 5 began to review the documents from the  
17:22:32 6 LNDD laboratory it became apparent to  
17:22:38 7 me that this was a significant  
17:22:39 8 wrongdoing on the part of the  
17:22:40 9 laboratory from a wide number of areas,  
17:22:43 10 so my initial testimony was with TD  
17:22:48 11 determination and focus today was chain  
17:22:51 12 of custody. But my feelings about the  
17:22:53 13 reporting of this positive have not  
17:22:55 14 changed, that it's wrong.

17:22:58 15 MR. SUH: No further  
17:22:59 16 questions.

17:23:00 17 MR. YOUNG: No further  
17:23:01 18 questions.

17:23:02 19 THE PRESIDENT: The panel  
17:23:03 20 has no questions. We're grateful for  
17:23:06 21 your assistance and you're free to go  
17:23:08 22 when you wish.

17:23:09 23 THE WITNESS: Thank you.

17:24:02 24 THE PRESIDENT: We were just  
17:24:06 25 going to ask you how you'd like to

1 BRUCE GOLDBERGER - REDIRECT

17:24:08 2 proceed. Mr. Landis is next. Would  
17:24:13 3 you like to proceed or do you think at  
17:24:14 4 this hour you'd rather that we did the  
17:24:17 5 legal stuff and started Mr. Landis in  
17:24:19 6 the morning?

17:24:21 7 MR. SUH: I would leave it  
17:24:22 8 up to the panel. I think we're ready  
17:24:23 9 to -- we can follow whatever procedure  
17:24:26 10 you wish.

17:24:29 11 MR. BARNETT: To the extent  
17:24:30 12 that I guess I control timing somewhat,  
17:24:32 13 although Mr. Landis will control it  
17:24:33 14 with his answers, I would estimate I've  
17:24:35 15 probably got somewhere between 40 to 50  
17:24:39 16 minutes. Could go faster. But I hate  
17:24:42 17 to get in the middle of it and be held  
17:24:44 18 to shorter. And I prefer to have it  
17:24:49 19 started and finished on the same day  
17:24:51 20 rather than carrying over the night.

17:24:54 21 THE PRESIDENT: Well, the  
17:24:56 22 courteous thing to do is to ask Mr.  
17:24:59 23 Landis what he feels.

17:25:01 24 MR. LANDIS: I'm free to do  
17:25:03 25 whatever Mr. Barnett wants to do. I'll

1 FLOYD LANDIS - DIRECT

17:25:04 2 try to talk fast, but I don't know how  
17:25:06 3 many questions he's got.

17:25:08 4 THE PRESIDENT: I think  
17:25:08 5 we'll proceed then because everybody  
17:25:11 6 seems to be comfortable with that. So  
17:25:13 7 if Mr. Landis would come forward.

17:25:43 8 Mr. Landis, I ask you to  
17:25:45 9 declare and affirm that the evidence  
17:25:47 10 you'll give to the panel will be the  
17:25:49 11 truth, the whole truth and nothing but  
17:25:50 12 the truth.

17:25:51 13 MR. LANDIS: Yes, I do.

17:25:53 14 THE PRESIDENT: Thank you.  
17:25:55 15 You've heard my explanation to the  
17:25:56 16 previous witness about how we'll  
17:25:58 17 proceed and we'll follow exactly the  
17:26:00 18 same story. Just bear with me one  
17:26:05 19 minute.

17:26:05 20 F L O Y D L A N D I S,  
17:26:05 21 having been first duly affirmed by  
17:26:05 22 the President, was examined and  
17:26:18 23 testified as follows:

17:26:18 24 THE PRESIDENT: Mr. Weiss, I  
17:26:19 25 think you're leading the witness, are

1 FLOYD LANDIS - DIRECT

17:26:21 2 you?

17:26:22 3 MR. SUH: I don't believe

17:26:23 4 so. I think I'll be doing most of the

17:26:25 5 questioning.

17:26:25 6 THE PRESIDENT: I

17:26:26 7 misunderstood.

17:26:29 8 MR. SUH: It will be brief.

17:26:31 9 DIRECT EXAMINATION

17:26:33 10 BY MR. SUH:

17:26:33 11 Q. Good afternoon.

17:26:34 12 A. Hello, Mr. Suh.

17:26:36 13 Q. Good afternoon, Mr. Landis.

17:26:38 14 Have you submitted a declaration in

17:26:40 15 connection with this case?

17:26:40 16 A. Yes, I have.

17:26:42 17 Q. And prior to submitting the

17:26:45 18 declaration did you have an opportunity

17:26:46 19 to review it?

17:26:46 20 A. Yes, several times.

17:26:47 21 Q. And do you affirm the

17:26:49 22 contents of that declaration?

17:26:51 23 A. Certainly I do, yes.

17:26:54 24 MR. SUH: No further

17:26:54 25 questions.

1 FLOYD LANDIS - CROSS

17:26:55 2 THE PRESIDENT: Thank you.

17:26:57 3 CROSS EXAMINATION

17:27:17 4 BY MR. BARNETT:

17:27:17 5 Q. Mr. Landis, I was just  
17:27:33 6 saying if I start going too fast you  
17:27:35 7 can let me know. You recall that the  
17:27:38 8 last time you testified you and I  
17:27:40 9 discussed testosterone use in cycling?

17:27:42 10 A. Yes, I remember that.

17:27:44 11 Q. And I believe that your  
17:27:46 12 testimony was that it was something you  
17:27:47 13 had heard rumors about people trying in  
17:27:50 14 cycling?

17:27:51 15 A. Certainly, yes.

17:27:51 16 Q. You also indicated that it  
17:27:53 17 may have been one of the doping  
17:27:54 18 substances that you researched on the  
17:27:56 19 internet?

17:27:56 20 A. Yes, absolutely.

17:27:58 21 Q. You were aware that at that  
17:28:02 22 hearing your attorneys argued that no  
17:28:04 23 cyclist in his right mind would  
17:28:06 24 microdose with testosterone?

17:28:08 25 A. Well, to clarify the point,



1 FLOYD LANDIS - CROSS

17:28:11 2 my research on the internet was not to  
17:28:13 3 decide whether to do it or not, it was  
17:28:15 4 to learn about it. I mean there were  
17:28:16 5 rumors in cycling, in all sports these  
17:28:19 6 days, and I don't remember exactly what  
17:28:22 7 it was that I learned, but I do  
17:28:24 8 remember that we argued that it makes  
17:28:25 9 no sense and I stand by that.

17:28:27 10 Q. You stand by the argument  
17:28:30 11 that it makes no sense for cyclists to  
17:28:32 12 use testosterone?

17:28:33 13 A. Absolutely.

17:28:35 14 Q. Did you follow the 2007 Tour  
17:28:38 15 de France?

17:28:38 16 A. Yes.

17:28:38 17 Q. And you're aware that  
17:28:39 18 Patrick Sinkewitz who dropped out of  
17:28:42 19 the 2007 Tour de France, recently  
17:28:44 20 admitted the use of testosterone gel?

17:28:46 21 A. I believe he dropped out due  
17:28:49 22 to a crash.

17:28:50 23 Q. Correct, I didn't mean to  
17:28:51 24 confuse that.

17:28:51 25 A. A lot of risks people take

1 FLOYD LANDIS - CROSS

17:28:54 2 in races make no sense.

17:28:55 3 Q. But to be clear, he dropped  
17:28:57 4 out because of a crash early on?

17:28:58 5 A. I believe so, yes.

17:28:59 6 Q. It then came out that he had  
17:29:00 7 a testosterone positive which he  
17:29:03 8 admitted to, correct?

17:29:04 9 A. From what I understand, yes.  
17:29:06 10 I don't know the man.

17:29:10 11 Q. He is the rider you  
17:29:12 12 mentioned in paragraph 22 of your  
17:29:13 13 witness statement who stayed on your  
17:29:15 14 wheel for the longest during stage 17?

17:29:17 15 A. Yes.

17:29:18 16 Q. Did you hear -- you follow  
17:29:23 17 cycling generally on the internet and  
17:29:25 18 keep up with these stories?

17:29:26 19 A. Yes, absolutely.

17:29:29 20 Q. Did you hear Mr. Sinkewitz's  
17:29:31 21 explanation as to what he did to get  
17:29:33 22 caught?

17:29:34 23 A. No, but I hope I was not  
17:29:36 24 involved in any way.

17:29:37 25 Q. He did not mention you.

1 FLOYD LANDIS - CROSS

17:29:38 2 A. Excellent.

17:29:39 3 Q. Let me read it to you, and  
17:29:41 4 the purpose is I want to understand if  
17:29:43 5 what he's explained squared with what  
17:29:45 6 your research was on testosterone use.  
17:29:48 7 He said "I have been using a product  
17:29:50 8 called Testogel which is supplied by  
17:29:52 9 the company Genopharm to balance  
17:29:55 10 testosterone deficit. The gel is  
17:29:58 11 applied on the skin and absorbed into  
17:30:00 12 the body. It helps the body to recover  
17:30:00 13 after hard training. Without thinking,  
17:30:01 14 in a moment of huge stupidity I applied  
17:30:04 15 some to my upper arm in our training  
17:30:06 16 camp in France in the evening before  
17:30:08 17 the dope test. I did this  
17:30:11 18 instinctively and without thinking of  
17:30:12 19 the possible results."

17:30:14 20 Is that similar to the  
17:30:14 21 rumors you heard regarding how people  
17:30:16 22 are using testosterone gel?

17:30:18 23 A. Seems awfully haphazard to  
17:30:20 24 having it lay around. I don't -- as  
17:30:22 25 far as that goes, I can't speak to

1 FLOYD LANDIS - CROSS

17:30:24 2 that. But I don't remember exactly  
17:30:25 3 what my research was and again it was  
17:30:27 4 just out of a matter of curiosity.

17:30:29 5 Q. You're aware that what he's  
17:30:31 6 describing there is generally referred  
17:30:32 7 to as microdosing?

17:30:33 8 A. I believe Joe Papp referred  
17:30:37 9 to it as that. That was the first I  
17:30:38 10 heard of it.

17:30:39 11 Q. And that was at the last  
17:30:40 12 hearing?

17:30:40 13 A. Yes.

17:30:40 14 Q. And Mr. Papp in fact showed  
17:30:43 15 the Testogel, 25 milligram, we put that  
17:30:46 16 on the Elmo, right?

17:30:47 17 A. Yes, which he had run out of  
17:30:49 18 but somehow still had.

17:30:52 19 Q. Mr. Sinkewitz also claimed  
17:30:54 20 that that small an amount wouldn't be  
17:30:57 21 detectable and he didn't do anything  
17:30:58 22 wrong. Do you think what he did was  
17:31:01 23 wrong?

17:31:01 24 A. Sorry, who claimed that?

17:31:03 25 Q. Mr. Sinkewitz he claimed

1 FLOYD LANDIS - CROSS

17:31:07 2 that -- first, he didn't think he would

17:31:09 3 get caught because it's microdosing.

17:31:11 4 Are you aware that there are cyclists

17:31:13 5 who think they could get away with it?

17:31:15 6 A. I would have to disagree

17:31:17 7 with that. If he admitted it and he

17:31:18 8 got caught, I would have to disagree

17:31:20 9 with that.

17:31:21 10 Q. You and I had this problem

17:31:23 11 last time. We like to talk and our

17:31:23 12 court reporter is going to throw

17:31:26 13 something at us again.

17:31:26 14 A. Sorry.

17:31:27 15 Q. You were aware prior to the

17:31:29 16 2006 tour that cyclists were using

17:31:30 17 testosterone?

17:31:31 18 A. I had heard of cyclists

17:31:33 19 using testosterone and I'm aware of

17:31:34 20 people who had used it in the past. As

17:31:36 21 to who was using it at that point, I

17:31:38 22 had no idea.

17:31:39 23 Q. For example, you knew that

17:31:40 24 your Phonak teammate, Sascha Urweider,

17:31:45 25 had tested positive?

1 FLOYD LANDIS - CROSS

17:31:46 2 A. I was aware of that, yes.

17:31:47 3 Q. And that was in 2006?

17:31:48 4 A. Yes.

17:31:49 5 Q. And I believe you testified  
17:31:50 6 that your understanding was some riders  
17:31:52 7 thought they could get away with it?

17:31:53 8 A. It appears that they must.  
17:31:55 9 I mean look, I don't remember exactly  
17:31:56 10 what my testimony was, but the logical  
17:31:59 11 thing that I can only imagine I was  
17:32:01 12 referring to is they must have done it  
17:32:03 13 thinking they were going to get away  
17:32:05 14 with it.

17:32:05 15 Q. Last time we talked a little  
17:32:10 16 bit about the doping problems  
17:32:12 17 experienced by your former team. Do  
17:32:14 18 you recall that discussion?

17:32:14 19 A. Yes.

17:32:14 20 Q. And just a few of the names  
17:32:17 21 were Tyler Hampton, Santi Perez, Santi  
17:32:20 22 Gonzalez, there were more, correct?

17:32:22 23 A. Yes, you failed to mention  
17:32:25 24 Fabrizio Guidi who had an A sample  
17:32:28 25 positive and a B sample negative. I

1 FLOYD LANDIS - CROSS

17:32:30 2 think that's important to know.

17:32:31 3 Q. How many do you recall there  
17:32:32 4 were that were disciplined either by  
17:32:36 5 the UCI or Team Phonak over a two-year  
17:32:39 6 period prior to and during your time at  
17:32:42 7 Phonak?

17:32:42 8 A. Well, you brought --  
17:32:44 9 certainly if you're including prior to  
17:32:46 10 and during my time that's more than two  
17:32:47 11 years and some of the -- you referred  
17:32:49 12 to were from before my time, so I can't  
17:32:52 13 say what the number is.

17:32:54 14 Q. There were roughly ten or 11,  
17:32:56 15 does that refresh your recollection?

17:32:57 16 A. I can't say. I would have  
17:32:59 17 to go over it.

17:33:03 18 Q. We could go to the  
17:33:04 19 transcript but because of the time of  
17:33:07 20 day.

17:33:07 21 A. It's up to you. It sounds  
17:33:09 22 like a good number.

17:33:10 23 Q. You knew some of these guys  
17:33:11 24 personally, Hamilton, Santi Perez, I  
17:33:14 25 don't know which of the ones --

1 FLOYD LANDIS - CROSS

17:33:16 2 A. I didn't know Santi Perez  
17:33:17 3 personally. I knew Tyler in passing  
17:33:19 4 and lived in the same town I did, we  
17:33:21 5 trained together every now and then.

17:33:23 6 Q. Are you aware of pretty good  
17:33:25 7 guys in cycling who have crossed that  
17:33:27 8 line and decided to cheat?

17:33:28 9 A. I can't speak as to what  
17:33:31 10 determines whether someone cheats or  
17:33:32 11 not. It's not a matter for me to  
17:33:34 12 determine. It's what their character  
17:33:36 13 is. I testified I remember in the past  
17:33:37 14 that my experience with Tyler was a  
17:33:39 15 pleasant one and I had no problems with  
17:33:43 16 Tyler.

17:33:45 17 Q. You don't think that only  
17:33:47 18 bad people make the decision to dope in  
17:33:49 19 cycling, do you?

17:33:50 20 A. I really can't say.

17:33:52 21 Q. How many years did you ride  
17:33:55 22 professionally in Europe?

17:33:56 23 A. Well, I began the first year  
17:34:00 24 I did any races in Europe was I believe  
17:34:03 25 the end of '98. So from the end of '98



1 FLOYD LANDIS - CROSS

17:34:06 2 to the end of 2006.

17:34:08 3 Q. During that time did you  
17:34:09 4 have any firsthand knowledge of doping  
17:34:11 5 by other cyclists?

17:34:12 6 A. Apart from what I learned  
17:34:15 7 with the rest of the world when there  
17:34:16 8 was an incident, no.

17:34:17 9 Q. You never saw anybody, one  
17:34:19 10 of your teammates dope?

17:34:20 11 A. No.

17:34:20 12 Q. You're aware that a rider  
17:34:23 13 named Martin Dugard recently published  
17:34:25 14 an article where he indicates that you  
17:34:28 15 told him that one of your teammates had  
17:34:31 16 doped?

17:34:31 17 A. I read the article, yes.

17:34:32 18 Q. And I'm correct in my  
17:34:34 19 assertion of what it claims?

17:34:35 20 A. I read the same article as  
17:34:36 21 you, I suppose.

17:34:38 22 Q. And to be clear, that  
17:34:39 23 article says that you told him one of  
17:34:41 24 your teammates doped, correct?

17:34:42 25 A. That's what I read, yes.

1 FLOYD LANDIS - CROSS

17:34:44 2 Q. Is he just lying?

17:34:45 3 A. I haven't spoken with Marty  
17:34:47 4 -- well, I spoke with him once on the  
17:34:50 5 phone for a matter of five minutes  
17:34:51 6 maybe during the tour last year. He  
17:34:53 7 asked me if regards to what was going  
17:34:56 8 on in the tour if he could do an  
17:34:57 9 article, this article, and I at the  
17:35:00 10 time indicated to him that I wasn't  
17:35:02 11 sure if I was willing to do any  
17:35:03 12 interviews. And I've not spoken to him  
17:35:06 13 since. Prior to that it's been a year  
17:35:08 14 and a half and certainly I've never in  
17:35:11 15 the context he put it said anything  
17:35:13 16 like that. I can't say why he would  
17:35:16 17 characterize it that way.

17:35:17 18 Q. Going back to Mr. Sinkewitz  
17:35:23 19 for a minute, do you agree with him  
17:35:25 20 when he says, which he did in an  
17:35:27 21 article recently, that when it comes to  
17:35:29 22 cycling, doping is "just part of being  
17:35:32 23 a professional"?

17:35:33 24 A. You know what, for him it  
17:35:34 25 was. I can't say.

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17:35:36 2 Q. You don't think the problems  
17:35:38 3 in cycling are that widespread?

17:35:40 4 A. Look, the only reference I  
17:35:42 5 have is what WADA leads me to believe.

17:35:46 6 Q. Mr. Landis, when it comes to  
17:35:50 7 cycling have you ever met anyone who  
17:35:52 8 wants to win as badly as you do?

17:35:54 9 A. Yes, absolutely.

17:35:55 10 Q. But it is -- you recently  
17:35:57 11 published a book, correct?

17:35:58 12 A. Yes.

17:35:59 13 Q. You wrote a book?

17:36:00 14 A. I did.

17:36:00 15 Q. Wrote --

17:36:02 16 A. I had help writing it. I'm  
17:36:03 17 not the best writer.

17:36:04 18 Q. It was one of the themes of  
17:36:05 19 your book that you're willing to endure  
17:36:07 20 pain and challenges nobody else is to  
17:36:10 21 win, right?

17:36:10 22 A. Sure. I wouldn't  
17:36:12 23 characterize it as nobody on earth. I  
17:36:14 24 mean there certainly are competitive  
17:36:16 25 people, but it helps to have some

1 FLOYD LANDIS - CROSS

17:36:17 2 drive, yes.

17:36:18 3 Q. And you're aware that there  
17:36:20 4 are cyclists who crossed over and  
17:36:23 5 decided to cheat in their quest to win?

17:36:25 6 A. Yes, some of them appears as  
17:36:27 7 though it had no effect.

17:36:29 8 Q. What I'm curious about is  
17:36:33 9 knowing your desire to win and you're  
17:36:35 10 here to tell the panel you haven't  
17:36:37 11 doped, correct, that was in your  
17:36:39 12 declaration?

17:36:39 13 A. I'm here to answer whatever  
17:36:41 14 question you've got.

17:36:42 15 Q. Is that your testimony, that  
17:36:43 16 you've not ever taken any prohibited  
17:36:46 17 substance?

17:36:46 18 A. Yes, what was in my  
17:36:48 19 declaration is absolutely true.

17:36:49 20 Q. I guess what I'm curious  
17:36:51 21 about is with that desire to win, in a  
17:36:53 22 sport where you know other people are  
17:36:54 23 doping, what is it that kept you from  
17:36:56 24 doping?

17:36:58 25 A. Well, that was my point with

1 FLOYD LANDIS - CROSS

17:37:02 2 regards to the fact that a lot of the  
17:37:03 3 people who you mentioned earlier don't  
17:37:04 4 win races of any kind. If nobody  
17:37:08 5 dopes, somebody still wins. If some  
17:37:11 6 guys dope that doesn't mean they're  
17:37:13 7 going to win.

17:37:14 8 What makes somebody win a  
17:37:16 9 bicycle race is a matter of genetics  
17:37:19 10 and a combination of that and  
17:37:20 11 determination and training. And to  
17:37:22 12 characterize it as often WADA has and  
17:37:27 13 USADA has in the public, you take  
17:37:30 14 testosterone and you win the Tour de  
17:37:33 15 France is so far from accurate, that  
17:37:34 16 it's just plain funny.

17:37:36 17 Q. Is it your testimony at all  
17:37:37 18 that it's an ethical issue for you,  
17:37:39 19 that you don't believe in doping, or is  
17:37:41 20 it just that you didn't think it would  
17:37:42 21 be effective?

17:37:43 22 A. I don't think that was the  
17:37:46 23 question I was answering. I believe in  
17:37:48 24 my mind that it wouldn't -- it wouldn't  
17:37:52 25 serve the purpose that I set out to

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17:37:53 2 accomplish in the first place had I  
17:37:55 3 done that. I race my bicycle for the  
17:37:58 4 satisfaction of the hard work and  
17:38:00 5 efforts I put into it. Of course I  
17:38:02 6 like to win and I just so happen to be  
17:38:04 7 one of a few people naturally gifted  
17:38:06 8 enough to do it. It doesn't reflect in  
17:38:08 9 any way on my character. But all I can  
17:38:10 10 do for my character's sake for a  
17:38:13 11 defense is to tell you. If you won't  
17:38:14 12 accept it, that's fine.

17:38:15 13 Q. Character is important to  
17:38:16 14 you?

17:38:16 15 A. Absolutely.

17:38:17 16 Q. I want to take you back to  
17:38:19 17 2005 for a minute. It was in 2005 that  
17:38:21 18 you learned you had advanced  
17:38:22 19 osteonecrosis?

17:38:24 20 A. Yes.

17:38:25 21 Q. Just briefly, what is that  
17:38:28 22 condition?

17:38:28 23 A. It's a -- it was a condition  
17:38:32 24 of the right femoral head in my right  
17:38:35 25 femur, the hip, developed after a

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17:38:39 2 traumatic fracture in 2003. Often  
17:38:42 3 traumatic fractures lead to reduced  
17:38:45 4 blood flow to the end of the femur. In  
17:38:48 5 that case there's several bones in your  
17:38:51 6 body that have the same effect on the  
17:38:52 7 shoulder and scapula and wrist. And  
17:38:55 8 over a period of time the bone doesn't  
17:38:57 9 receive the nutrients it needs to  
17:38:59 10 maintain its life and it deteriorates.  
17:39:03 11 And so it collapsed over a period of  
17:39:04 12 time and led to what ultimately causes  
17:39:06 13 the pain is arthritis.

17:39:09 14 Q. And that was a bad day, the  
17:39:10 15 day you received that diagnosis?

17:39:12 16 A. Yes, absolutely.

17:39:14 17 Q. And you were concerned that  
17:39:15 18 it might affect your ability to race  
17:39:17 19 going forward?

17:39:18 20 A. Well, there was no way to  
17:39:20 21 know. Because it's such a slow process  
17:39:23 22 there was no way to know at what point  
17:39:25 23 it would progress to where I couldn't  
17:39:27 24 race. I mean I had just finished, not  
17:39:28 25 long before I had finished the Tour de

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17:39:31 2 France and the d'Espagne in which I was  
17:39:34 3 the leader.

17:39:35 4 Q. And you had just signed a  
17:39:36 5 \$700,000 deal with Phonak at this time,  
17:39:39 6 correct, about the time that you  
17:39:41 7 learned? I'm not sure of the exact  
17:39:42 8 timing, so why don't you characterize  
17:39:44 9 it.

17:39:44 10 A. Was about that time and the  
17:39:47 11 amount was, I think, I can't remember  
17:39:51 12 exactly, but that's an overestimation I  
17:39:53 13 believe.

17:39:53 14 Q. Okay. And to be fair, I got  
17:39:56 15 that from an article written by Daniel  
17:39:59 16 Coyle for The New York Times in July of  
17:40:01 17 2006. Do you remember Mr. Coyle?

17:40:03 18 A. Yes, I know Dan Coyle well,  
17:40:05 19 yes.

17:40:05 20 Q. Do you remember when you  
17:40:07 21 told him about the diagnosis, this is  
17:40:09 22 what's in the article and you can tell  
17:40:11 23 me if it's correct or not, the quote  
17:40:13 24 was "I finally had everything the way I  
17:40:15 25 wanted it and then suddenly it was all



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17:40:17 2 going to go away, my team, my health,  
17:40:19 3 my career, my everything. I got  
17:40:22 4 paralyzed by the whole situation so I  
17:40:23 5 just told myself it was going to be all  
17:40:25 6 right and blocked everything else out."  
17:40:27 7 Did that sound about right?

17:40:28 8 A. I did, yes, I trained very  
17:40:31 9 hard.

17:40:31 10 Q. And it was a dark day. You  
17:40:33 11 were afraid everything you worked for  
17:40:35 12 was about to fall away?

17:40:36 13 A. Sure. It wasn't that day.  
17:40:37 14 It was a period of time where at some  
17:40:39 15 point it was inevitable that it was not  
17:40:41 16 going to work. It could have been a  
17:40:42 17 year. It could have been ten years.

17:40:43 18 Q. Was one of the things you  
17:40:44 19 were worried about losing your Phonak  
17:40:46 20 contract?

17:40:47 21 A. Well, I have a family to  
17:40:49 22 take care of. I worry about a lot of  
17:40:51 23 things in life. Certainly that's one  
17:40:53 24 of them. More importantly was about  
17:40:54 25 the goal I had set out to accomplish

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17:40:57 2 and that was possible that would be  
17:40:59 3 taken away.

17:40:59 4 Q. Did you go to the leadership  
17:41:01 5 of Phonak and tell them about your  
17:41:04 6 medical situation, disclose it to them?

17:41:06 7 A. I told the doctors a few  
17:41:08 8 months into the season.

17:41:10 9 Q. But isn't it true that you  
17:41:12 10 purposely deceived your employer at the  
17:41:14 11 team physical?

17:41:16 12 A. That's a mischaracterization.  
17:41:18 13 There was nothing wrong with me. There  
17:41:20 14 was nothing preventing me from racing at  
17:41:22 15 the time.

17:41:22 16 Q. Well, on Page 104 of your  
17:41:25 17 book -- this is the book you wrote,  
17:41:28 18 correct?

17:41:28 19 A. Yes.

17:41:28 20 Q. You're quoted as -- let me  
17:41:32 21 lay the foundation. You took a team  
17:41:34 22 physical for Phonak?

17:41:34 23 A. Yes.

17:41:35 24 Q. You knew you had to pass  
17:41:36 25 that physical?

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17:41:37 2 A. Yes.

17:41:37 3 Q. On Page 104 you write, "My  
17:41:39 4 hip was still so sore that I couldn't  
17:41:41 5 go up a flight of stairs without using  
17:41:43 6 the handrail"; is that right?

17:41:44 7 A. At that point, yes. At that  
17:41:47 8 point I had just had surgery a week and  
17:41:50 9 a half before.

17:41:50 10 Q. You were ten days past your  
17:41:52 11 surgery?

17:41:53 12 A. More or less. I can't  
17:41:54 13 remember the exact number, yes.

17:41:55 14 Q. Yet when the doctor who had  
17:41:57 15 given you your physical asked why your  
17:41:59 16 right leg was shorter than your left  
17:42:01 17 you lied to him?

17:42:02 18 A. No, I told him I had broken  
17:42:03 19 it.

17:42:03 20 Q. And on Page 105 you say that  
17:42:05 21 you then told him, "It's fine now."

17:42:09 22 A. It was fine at that point.

17:42:10 23 Q. So not being able to walk up  
17:42:12 24 the stairs without a handrail is --

17:42:14 25 A. I could ride my bike. See

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17:42:16 2 walking and riding are different.

17:42:17 3 Q. So you didn't --

17:42:18 4 A. I think by the way, I think  
17:42:19 5 I proved that thereafter.

17:42:20 6 Q. You didn't think you were  
17:42:22 7 deceiving your team?

17:42:23 8 A. No, I intended to get  
17:42:24 9 through that season if it was the last  
17:42:26 10 thing I did.

17:42:27 11 Q. So you think you acted  
17:42:31 12 ethically there?

17:42:32 13 A. I don't think that I  
17:42:33 14 deceived anybody, no.

17:42:34 15 Q. You didn't laugh with your  
17:42:36 16 friend Brett Kay about passing that  
17:42:38 17 physical directly afterwards as it says  
17:42:40 18 in the book?

17:42:41 19 A. How could we not think it  
17:42:43 20 was amusing that I had surgery and that  
17:42:44 21 I was okay and functioning properly.  
17:42:47 22 Look, if there was something  
17:42:48 23 drastically wrong with me it would have  
17:42:50 24 been noticeable.

17:42:51 25 Q. Well it would have been

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17:42:52 2 noticeable during the physical exam

17:42:54 3 where he tried to determine that your

17:42:56 4 right leg was stiff but you made your

17:42:59 5 left leg seem stiff so he couldn't

17:43:02 6 discover your condition?

17:43:03 7 A. Both legs were stiff.

17:43:06 8 Q. You made your left leg seem

17:43:09 9 stiff to hide your condition?

17:43:11 10 A. Look, my right leg has

17:43:14 11 plenty of flexibility, I think I proved

17:43:14 12 that.

17:43:15 13 Q. Let's take a look at another

17:43:16 14 situation, and I will do this quickly.

17:43:16 15 In the previous hearing --

17:43:17 16 THE PRESIDENT: Excuse me,

17:43:19 17 it's very thoughtful of you to do it

17:43:21 18 quickly, but we have a transcriber who

17:43:25 19 is struggling to keep up because you're

17:43:27 20 going a hundred miles an hour.

17:43:29 21 A. I'll try to talk slowly.

17:43:31 22 Q. We will slow down. In the

17:43:34 23 previous hearing you were forced to

17:43:36 24 fire your business manager, Will

17:43:39 25 Geoghegan, correct?

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17:43:39 2 A. Yes.

17:43:40 3 Q. And that was because the  
17:43:41 4 night before Greg LeMond testified Mr.  
17:43:43 5 Geoghegan called him pretending to be  
17:43:45 6 the man who had sexually abused Greg  
17:43:48 7 LeMond as a child?

17:43:49 8 A. Yes, it was an unfortunate  
17:43:51 9 situation, yes.

17:43:51 10 Q. And when he pretended to be  
17:43:54 11 a sexual abuser he told Greg he would  
17:43:57 12 be at the hearing the next day when he  
17:43:59 13 was scheduled to testify?

17:43:59 14 A. Yes, that entire story is in  
17:44:01 15 the hearing of the last time.

17:44:02 16 Q. It's also in the transcript  
17:44:05 17 that Mr. LeMond was so shook up by this  
17:44:09 18 incident he filed a police report for  
17:44:10 19 witness tampering?

17:44:11 20 A. Which was immediately  
17:44:12 21 thereafter dropped, yes, the police  
17:44:14 22 dropped it.

17:44:14 23 Q. Did your attorneys have  
17:44:15 24 anything to do with him dropping it?

17:44:17 25 A. No.

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17:44:17 2 Q. In your book you indicate  
17:44:18 3 that you and Will were angry that night  
17:44:21 4 because you anticipated that Mr. LeMond  
17:44:23 5 was going to testify the next day that  
17:44:26 6 you admitted to him that you had doped?

17:44:29 7 A. Well, have you ever been in  
17:44:32 8 a situation where somebody testified  
17:44:34 9 under oath something that was not true  
17:44:36 10 about you? I can tell you it makes you  
17:44:38 11 angry, yes.

17:44:39 12 Q. And you were anticipating  
17:44:40 13 that was going to happen?

17:44:41 14 A. Well, that's what we were  
17:44:43 15 told was going to happen. By the way,  
17:44:46 16 I mentioned that we also thought it was  
17:44:47 17 going to happen because Greg LeMond had  
17:44:50 18 publicly commented to that in the press  
17:44:53 19 previous to the hearing. So I mean it  
17:44:55 20 was no secret what he was going to say.

17:44:58 21 Q. And you had previously been  
17:44:59 22 angry at Greg LeMond and posted a  
17:45:02 23 threatening internet message about him  
17:45:05 24 as well, right?

17:45:06 25 A. Yes, which I regret, yes.

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17:45:07 2 Q. And we've already testified  
17:45:09 3 that you were sitting at the table the  
17:45:11 4 evening that Mr. Geoghegan made his  
17:45:13 5 call?

17:45:13 6 A. Yes.

17:45:13 7 Q. And you knew about it within  
17:45:15 8 seconds?

17:45:15 9 A. Yes.

17:45:16 10 Q. Mr. Landis, isn't it true  
17:45:18 11 that you were angry, Will was angry,  
17:45:20 12 and you actually put Will Geoghegan up  
17:45:23 13 to making that phone call to try to  
17:45:25 14 discourage Greg LeMond from testifying?

17:45:27 15 A. That is absolutely untrue.

17:45:28 16 Q. You knew instantly according  
17:45:34 17 to your book that will had "not only  
17:45:37 18 crossed the line, but ran right over it  
17:45:39 19 and dove off of a cliff."

17:45:41 20 A. Like I said, there was no  
17:45:43 21 good outcome there for Will, for  
17:45:45 22 LeMond, for anyone.

17:45:47 23 Q. Did what Will did square  
17:45:50 24 with your personal ethics?

17:45:51 25 A. No, certainly not.



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17:45:52 2 Q. And we established at the  
17:45:56 3 last hearing your response to what Will  
17:45:58 4 did was to wake up the next morning,  
17:46:00 5 drive with him to the hearing and have  
17:46:01 6 him sit behind you in the hearing box  
17:46:04 7 as part of your team, correct?

17:46:05 8 A. Yes, that's right.

17:46:06 9 Q. And in fact, you didn't --  
17:46:07 10 that only changed and you only fired  
17:46:09 11 him after it came out publicly that we  
17:46:12 12 knew it was him that made the call?

17:46:13 13 A. I'll have to look at the  
17:46:15 14 transcript because we went through a  
17:46:16 15 long debate on this point. My  
17:46:18 16 recollection it's been awhile, but  
17:46:20 17 certainly he was fired.

17:46:22 18 Q. You didn't fire him that  
17:46:24 19 night on the spot when you knew he had  
17:46:26 20 driven off the cliff, did you?

17:46:27 21 A. Will was my friend whether  
17:46:29 22 he made a mistake or not. Stayed that  
17:46:32 23 way. And to this day he's my friend.

17:46:35 24 Q. We talked last time about  
17:46:38 25 the Phonak internal doping policy. Do

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17:46:42 2 you recall that?

17:46:42 3 A. Yes. I don't recall exactly  
17:46:44 4 the testimony, but I recall the  
17:46:45 5 subject, yes.

17:46:46 6 Q. Do you recall testifying  
17:46:48 7 that they had a hematocrit cutoff?

17:46:51 8 A. Yes, I do.

17:46:52 9 Q. And can you just for the  
17:46:54 10 panel's benefit explain what that  
17:46:55 11 policy was and why it existed?

17:46:57 12 A. I don't remember exactly  
17:46:58 13 what the numbers were, but somewhat  
17:47:00 14 lower than -- well, UCI has their own  
17:47:07 15 limit and then the team has their own  
17:47:09 16 test.

17:47:10 17 Q. The UCI limit is 50,  
17:47:11 18 correct?

17:47:11 19 A. From what I understand. I  
17:47:13 20 think they use the hemoglobin number,  
17:47:15 21 but I don't know exactly what that is.

17:47:17 22 Q. You testified at the  
17:47:17 23 previous hearing that you thought the  
17:47:19 24 number for Phonak was 47. Do you  
17:47:22 25 recall testifying to that?

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17:47:22 2 A. I believe it was yes, I  
17:47:24 3 don't know exactly what it was. The  
17:47:27 4 doctor -- I was not the team doctor. I  
17:47:30 5 don't know a lot about these things.

17:47:33 6 Q. That's the number you used  
17:47:34 7 in your testimony last hearing,  
17:47:35 8 correct?

17:47:35 9 A. It may have been mistaken.  
17:47:37 10 I don't even know what the testimony  
17:47:38 11 was, but if you say so I'll take your  
17:47:40 12 word for it.

17:47:41 13 Q. Let's call it up. It's  
17:47:43 14 Minuscript Page 410. And for the  
17:47:46 15 panel's benefit, if you have the  
17:47:47 16 transcript it's 1644 to 1645.

17:48:15 17 THE PRESIDENT: Would you  
17:48:16 18 like Mr. Landis to read a specific part  
17:48:18 19 before you go any further?

17:48:20 20 MR. BARNETT: Yes, I  
17:48:21 21 apologize, I'll be right there.

17:48:25 22 Q. If you look at the bottom of  
17:48:27 23 Page 1644 is where we begin discussing  
17:48:30 24 this, and the carryover to 1645. Do  
17:48:33 25 you have that?

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17:48:33 2 A. I think I saw it for a  
17:48:35 3 second there.

17:48:36 4 THE PRESIDENT: We had it  
17:48:37 5 enlarged and now it's gone away.

17:48:39 6 A. I got the idea.

17:48:40 7 Q. 1645. I'm in no way trying  
17:48:50 8 to trick you or mischaracterize. You  
17:48:52 9 see where you testified that you  
17:48:53 10 thought the number was 47?

17:48:56 11 A. Yes. Again, like I say, I  
17:49:00 12 think it was lower than the UCI limit.  
17:49:06 13 I suppose a few lower would be 47. I  
17:49:08 14 don't know what it is. I said I think  
17:49:09 15 it was 47, yes.

17:49:10 16 Q. And what is your  
17:49:12 17 understanding of why Phonak had that  
17:49:14 18 cutoff?

17:49:16 19 A. Well, because they had had  
17:49:18 20 issues in the past and it was becoming  
17:49:21 21 detrimental to the sponsor or to at  
17:49:23 22 least to the prospect of keeping a  
17:49:25 23 sponsor and I think they wanted to go  
17:49:29 24 out of their way to just be careful  
17:49:31 25 even at the risk of -- at the risk of

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17:49:34 2 hurting somebody.

17:49:36 3 Q. What happened to a rider if  
17:49:39 4 their hematocrit level exceeded that  
17:49:42 5 Phonak limit?

17:49:43 6 A. Well, I don't know exactly  
17:49:44 7 how the policy went. I know that there  
17:49:47 8 was one person sent home due to some  
17:49:50 9 internal control and as far as I know  
17:49:52 10 that was one of a few internal controls  
17:49:54 11 that they did. They didn't do a urine  
17:49:57 12 test. So from what was my  
17:49:59 13 understanding of what I was told was he  
17:50:01 14 exceeded the limit at some point. Now,  
17:50:04 15 by how much or how they decided that I  
17:50:07 16 really can't say.

17:50:09 17 Q. But your understanding was  
17:50:10 18 if you exceeded that limit Phonak would  
17:50:13 19 not allow you to race that day?

17:50:16 20 A. That was my understanding of  
17:50:17 21 how the policy went, yes. But again, I  
17:50:19 22 can't say I saw it implemented in  
17:50:21 23 person ever.

17:50:22 24 Q. And that reason is because a  
17:50:25 25 high hematocrit suggests doping,

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17:50:28 2 correct?

17:50:29 3 A. It can.

17:50:30 4 Q. Do you also recall that we  
17:50:34 5 had a discussion at the last hearing  
17:50:36 6 about your UCI blood results that we  
17:50:38 7 had requested?

17:50:39 8 A. Yes.

17:50:39 9 Q. And the context of that was  
17:50:42 10 we had served a document request and  
17:50:44 11 you had never provided the blood  
17:50:46 12 results, correct?

17:50:47 13 A. Yes, it was served upon me.  
17:50:49 14 I did not have the results at the time.

17:50:51 15 Q. And when you say you didn't  
17:50:53 16 have the results, we established at the  
17:50:55 17 hearing that you received them by email  
17:50:57 18 along with Dr. Demir; is that correct?

17:50:59 19 A. No, that's not true. No, we  
17:51:03 20 established that Denise Demir received  
17:51:05 21 them. They would not send them  
17:51:07 22 directly to me because it was a matter  
17:51:08 23 of medical issues.

17:51:09 24 Q. And you knew that you were  
17:51:10 25 copied on the email which led you to

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17:51:12 2 know that she had them, is that a  
17:51:14 3 better way to say it?

17:51:15 4 A. I don't recall the exact  
17:51:16 5 email exchange but I was not copied on  
17:51:18 6 the results themselves.

17:51:20 7 Q. Okay. But you remember that  
17:51:21 8 we talked with the panel and went  
17:51:23 9 through your email address, Mr. Brunet  
17:51:25 10 pointed it out.

17:51:27 11 A. I guess we could read it,  
17:51:29 12 but I remember the incident, yes.

17:51:30 13 Q. Do you recall that the  
17:51:33 14 results -- well, let's bring up GDC  
17:51:49 15 01372. And again, for context, these  
17:51:52 16 results were not produced to us until  
17:51:54 17 after your testimony closed, is that  
17:51:57 18 your recollection?

17:51:59 19 A. They were yes, that's  
17:52:01 20 correct.

17:52:01 21 MR. SUH: Mr. Chair, we  
17:52:02 22 would again object. This is -- if we  
17:52:05 23 are again to apply the same rule that  
17:52:08 24 was applied to us, this is an exhibit  
17:52:10 25 that was an argument that was not

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17:52:12 2 raised in their brief and it would be  
17:52:15 3 inappropriate to raise at this time.  
17:52:16 4 This is -- if again the same rule would  
17:52:19 5 be applied to us as them as it was to  
17:52:21 6 us.

17:52:26 7 MR. RIVKIN: When was this  
17:52:27 8 exhibit submitted?

17:52:30 9 MR. BARNETT: This has been  
17:52:31 10 in the record since the day it was  
17:52:32 11 produced to us at the hearing upon the  
17:52:34 12 close of Mr. Landis' testimony.

17:52:36 13 MR. RIVKIN: In this appeal  
17:52:37 14 when was it submitted?

17:52:40 15 MR. BARNETT: When the  
17:52:40 16 record was submitted by Mr. Suh on his  
17:52:43 17 original list.

17:52:49 18 THE PRESIDENT: Is this  
17:52:50 19 particular topic raised in the briefs?

17:52:52 20 MR. BARNETT: I honestly  
17:53:04 21 don't recall if we footnoted it or not.  
17:53:07 22 Let me explain to the panel why I have  
17:53:09 23 two more questions about this subject.  
17:53:10 24 Because the lateness of when we got  
17:53:12 25 it -- I'm not raising this as proof



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17:53:14 2 that the panel should rely on for  
17:53:16 3 doping purposes for proving the doping  
17:53:20 4 violation. I am raising it as  
17:53:21 5 impeachment and to go to Mr. Landis'  
17:53:23 6 credibility. Since Mr. Suh said that  
17:53:26 7 this entire appeal is about the  
17:53:27 8 credibility of the two parties, I think  
17:53:30 9 nothing is more at issue than Mr.  
17:53:32 10 Landis' own personal credibility.

17:53:34 11 THE PRESIDENT: Just so I  
17:53:35 12 understand, this particular document  
17:53:37 13 was in the record at the lower hearing,  
17:53:39 14 was it?

17:53:40 15 MR. BARNETT: Yes.

17:53:47 16 THE PRESIDENT: And it's  
17:53:48 17 being produced as an exhibit in this  
17:53:50 18 hearing?

17:53:51 19 MR. BARNETT: It has. It's  
17:53:52 20 actually a GDC exhibit.

17:53:56 21 MR. SUH: I guess I would  
17:53:57 22 interject the following. If it's being  
17:53:59 23 used for impeachment we don't have an  
17:54:01 24 objection. As long as it's being used  
17:54:03 25 for impeachment.

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17:54:05 2 THE PRESIDENT: We've  
17:54:06 3 clarified that and that's the approach  
17:54:07 4 that's being taken, so we'll allow the  
17:54:10 5 questioning to continue. You're free  
17:54:23 6 to proceed when you're ready, Mr.  
17:54:26 7 Barnett.

17:54:27 8 MR. BARNETT: Thank you, I  
17:54:28 9 want to make sure that he has it in a  
17:54:30 10 form that he can read.

17:54:31 11 Q. This is the form that it was  
17:54:33 12 produced to us, so it is somewhat  
17:54:35 13 small.

17:54:36 14 A. No problem.

17:54:37 15 THE PRESIDENT: Mr. Landis,  
17:54:38 16 please feel free to take time to look  
17:54:40 17 at it if you haven't seen it for  
17:54:42 18 awhile.

17:54:44 19 A. Go with the question, if I  
17:54:46 20 need to review it I'll let you know.

17:54:48 21 Q. If you look on your monitor  
17:54:50 22 the part that has been pulled up  
17:54:51 23 indicates that on July 11th, 2006, your  
17:54:54 24 hematocrit level was 48.2, correct?

17:54:57 25 A. That's what it appears, yes.

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17:55:00 2 Q. So by your indication of the  
17:55:02 3 team's policy had the team conducted  
17:55:04 4 this test rather than UCI, you would  
17:55:06 5 have been prevented from riding during  
17:55:08 6 that stage of the Tour de France?

17:55:10 7 A. Yes, but the team did not  
17:55:12 8 conduct this test.

17:55:13 9 Q. Lucky for you, right?

17:55:14 10 A. No, it was not luck at all.  
17:55:16 11 In fact, this is why I believe, I'm no  
17:55:18 12 lawyer, this is why we have the rule  
17:55:20 13 where you need to let us know what the  
17:55:21 14 questions will be because it turns out  
17:55:23 15 there was an incident before this race  
17:55:26 16 in the Giro that year where three  
17:55:28 17 riders from several teams, three from  
17:55:31 18 each team were over 50 and the UCI came  
17:55:35 19 back with some information that their  
17:55:38 20 machine was miscalibrating.

17:55:39 21 Now these machines from what  
17:55:41 22 I understand, and from what I've  
17:55:43 23 witnessed personally when the team is  
17:55:45 24 doing a test, if you'll just run the  
17:55:47 25 same sample from the same vial several

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17:55:50 2 times and have the margin of error  
17:55:53 3 roughly at a 48 level of three either  
17:55:55 4 way. So what looks like 48 there could  
17:55:57 5 be anything. These machines are not  
17:56:00 6 extremely reliable and that's why they  
17:56:02 7 don't rely on the 50 as a positive  
17:56:04 8 test.

17:56:04 9 Q. And this blood test we  
17:56:07 10 established at the last hearing was in  
17:56:10 11 Dr. Demir's possession from August 9th  
17:56:12 12 on, she had that -- August 9th, right  
17:56:15 13 after the Tour de France on she had  
17:56:17 14 these blood results, correct?

17:56:18 15 A. That was her testimony. I  
17:56:20 16 don't remember when the -- when the  
17:56:22 17 email took place.

17:56:24 18 Q. And we didn't get to explore  
17:56:26 19 that at the last hearing because you  
17:56:28 20 didn't produce it until after you  
17:56:30 21 already testified, that's why we didn't  
17:56:32 22 talk about it?

17:56:32 23 A. Look, you had almost six  
17:56:34 24 months now and you still didn't bring  
17:56:36 25 in the margin of error. Had you

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17:56:39 2 brought in the margin of error, the  
17:56:40 3 first one would be higher than the  
17:56:42 4 second.

17:56:43 5 Q. Isn't it true you did not  
17:56:44 6 produce these blood tests in response  
17:56:46 7 to our requests because you knew that  
17:56:48 8 it would look bad for you?

17:56:49 9 A. No, absolutely not.

17:56:52 10 Q. Who is Dr. Demir?

17:56:54 11 A. She's a doctor that works  
17:56:56 12 for the team or worked for the team.  
17:56:58 13 The team no longer exists.

17:56:59 14 Q. Was she your primary  
17:57:00 15 physician during the 2006 tour?

17:57:03 16 A. Primary physician, no, I  
17:57:05 17 would never characterize her as that.

17:57:07 18 Q. Sorry, was she the team  
17:57:08 19 doctor you dealt with the most?

17:57:10 20 A. There were three team  
17:57:11 21 doctors during the tour.

17:57:13 22 Q. Is she the one who gave you  
17:57:14 23 the IV after stage 16?

17:57:16 24 A. She is, yes.

17:57:17 25 Q. And again, I noticed in your

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17:57:21 2 witness statement you went through the  
17:57:23 3 fact that you were tired and various  
17:57:25 4 other things that you did on stage 16.  
17:57:27 5 You didn't mention the IV, did you?

17:57:30 6 A. It's clear, it's in the  
17:57:31 7 testimony. Thanks for bringing it up.

17:57:36 8 Q. And just to be clear, you  
17:57:38 9 never made any effort to determine if  
17:57:40 10 that IV was perhaps contaminated with  
17:57:42 11 testosterone, did you?

17:57:43 12 A. I don't carry an IRMS  
17:57:47 13 machine at the race.

17:57:48 14 Q. You're aware that a lot of  
17:57:51 15 athletes who test positive submit a  
17:57:53 16 contamination defense?

17:57:55 17 A. I don't -- look, this is the  
17:57:58 18 first case I've ever really paid  
17:58:01 19 attention.

17:58:02 20 Q. Are you familiar with Scott  
17:58:05 21 Moninger?

17:58:05 22 A. I know Scott Moninger as a  
17:58:08 23 friend.

17:58:08 24 Q. And you know he had a doping  
17:58:10 25 violation because he's a friend of

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17:58:11 2 yours?

17:58:11 3 A. I know of it.

17:58:12 4 Q. And you knew that he argued  
17:58:13 5 it was contamination?

17:58:14 6 A. That one specifically, yes,  
17:58:16 7 I heard that.

17:58:16 8 Q. I guess what I'm curious  
17:58:18 9 about is you're notified that you have  
17:58:20 10 a doping result and I see articles  
17:58:23 11 almost immediately after that you  
17:58:25 12 immediately said there was zero chance  
17:58:26 13 that this resulted from contamination  
17:58:29 14 and here's my question. How can you be  
17:58:31 15 sure --

17:58:32 16 A. Okay, look.

17:58:33 17 Q. Let me finish my question.

17:58:35 18 A. Fair enough.

17:58:36 19 Q. As you sit here today how  
17:58:37 20 can you be sure that there wasn't  
17:58:39 21 testosterone in your system?

17:58:40 22 A. I cannot, no one can. And  
17:58:41 23 for that matter, I had one IV  
17:58:44 24 throughout the race. You saw  
17:58:47 25 apparently alleging there was other

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17:58:48 2 positives which couldn't possibly have  
17:58:50 3 occurred from the IV because it took  
17:58:52 4 place before. So either your theory is  
17:58:54 5 right or mine is right.

17:58:55 6 Q. My theory is not that you  
17:58:58 7 had a contamination?

17:58:59 8 A. Well, I appreciate the  
17:59:00 9 clarification.

17:59:02 10 Q. Isn't it true that rather  
17:59:05 11 than investigate -- well, did you  
17:59:07 12 conduct any investigation among your  
17:59:09 13 team to see if there was any  
17:59:11 14 contamination or if anybody on your  
17:59:13 15 team had sabotaged you?

17:59:15 16 A. That was not one of my  
17:59:17 17 options to look at. Because of the  
17:59:18 18 nature of the way this all went down,  
17:59:20 19 because the lab leaked the results  
17:59:23 20 immediately. And then furthermore, I  
17:59:26 21 was spending all of my time the next  
17:59:28 22 few days after that trying to find the  
17:59:30 23 right person to go witness the test  
17:59:32 24 which turns out I didn't find the right  
17:59:34 25 one immediately, but I was not given



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17:59:36 2 very much time. All of my time was  
17:59:38 3 consumed by that. My time was not  
17:59:40 4 trying to figure out what happened. I  
17:59:42 5 didn't have any experience with  
17:59:43 6 anti-doping in any way apart from  
17:59:46 7 giving urine samples.

17:59:47 8 Q. Prior to the first hearing  
17:59:49 9 did you conduct any examination to  
17:59:51 10 figure out if there had been any  
17:59:53 11 contamination?

17:59:53 12 A. I don't know what kind of  
17:59:54 13 investigation you'd be referring to.

17:59:57 14 Q. Instead, isn't it true that  
17:59:58 15 you hired Mr. Suh and made the  
18:00:04 16 strategic decision that your defense  
18:00:06 17 was going to be attack the French lab,  
18:00:09 18 to bring down the French lab, you made  
18:00:11 19 that decision early, correct?

18:00:12 20 A. We made that decision after  
18:00:13 21 I was given the lab document package  
18:00:16 22 and we saw what had taken place. How  
18:00:18 23 could I know whether it was  
18:00:20 24 contamination or an incompetent lab if  
18:00:22 25 I had not been given any documents? A

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18:00:24 2 lot of these things you're referring to  
18:00:26 3 you're insinuating I somehow knew what  
18:00:29 4 was in the document package before it  
18:00:31 5 was provided.

18:00:31 6 Q. In your book you discussed  
18:00:33 7 the fact that you flew Mr. Suh over to  
18:00:36 8 meet with the head of the French  
18:00:37 9 Anti-Doping Agency. Do you recall  
18:00:39 10 writing about that?

18:00:39 11 A. Yes.

18:00:40 12 Q. And you quote Mr. Suh  
18:00:42 13 discussing his meeting with Baudry  
18:00:45 14 who's the head of the AFLD and in your  
18:00:49 15 book you say, "He was unaware of what  
18:00:52 16 was going on," Maurice said when he  
18:00:53 17 returned. "So I explained that our  
18:00:55 18 defense was essentially to take down  
18:00:57 19 the French lab in an embarrassing way."

18:01:01 20 A. Well, you know, Maurice, his  
18:01:04 21 take on the point of view of the  
18:01:09 22 director of the lab, what was his name  
18:01:11 23 again, was that he was interested in  
18:01:14 24 looking into what had happened. Now,  
18:01:16 25 he's not the only person throughout

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18:01:17 2 this process that's been somewhat  
18:01:19 3 deceiving in their appearance of  
18:01:21 4 objectivity.

18:01:23 5 Q. Well in fact you heard Mr.  
18:01:26 6 Suh say earlier that LNDD and USADA  
18:01:29 7 were engaged in a coverup. He said  
18:01:31 8 that during the opening, correct?

18:01:32 9 A. Absolutely, they were.

18:01:34 10 Q. And you believe that  
18:01:34 11 personally?

18:01:35 12 A. Well, we have evidence of  
18:01:36 13 it, so I believe generally what I see.

18:01:38 14 Q. And just to be clear, when  
18:01:40 15 you say LNDD you mean the employees who  
18:01:43 16 we're going to hear testimony from?

18:01:45 17 A. Well, you know it's hard for  
18:01:47 18 us to know who really did what because  
18:01:49 19 as you know, you've been on the other  
18:01:51 20 side of it, it's difficult to get  
18:01:53 21 testimony from just about anyone and we  
18:01:55 22 still don't have the SOPs.

18:01:57 23 Q. Do you personally think the  
18:02:00 24 LNDD employees are out to get you?

18:02:02 25 A. No, they're out to save

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18:02:04 2 themselves from the mistakes they made,  
18:02:06 3 sir.

18:02:06 4 Q. And you think the USADA  
18:02:08 5 attorneys at this table are unethical  
18:02:11 6 practitioners?

18:02:11 7 A. Some of the things I've  
18:02:13 8 seen, we've been produced things, they  
18:02:14 9 come from you, you're the first step in  
18:02:16 10 the line. Where they came from you  
18:02:18 11 should probably research.

18:02:19 12 Q. You also criticized the last  
18:02:23 13 panel and when the result came out you  
18:02:26 14 said the only way the result could have  
18:02:29 15 come out any differently is if one of  
18:02:31 16 the arbitrators was drunk and checked  
18:02:33 17 the wrong box. Did you make that  
18:02:35 18 statement?

18:02:35 19 A. Well, maybe they were, but  
18:02:37 20 look, I read the decision and it was  
18:02:40 21 based on a lot of things which frankly  
18:02:42 22 Maurice points out to be absolutely  
18:02:44 23 untrue. I mean how could they have  
18:02:47 24 known the columns were the same? Mr.  
18:02:52 25 Le Petit didn't exist at that point.

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18:02:53 2 Q. I want to be clear it's your  
18:02:54 3 testimony and your view of this case  
18:02:56 4 that the LNDD employees, the USADA  
18:02:59 5 employees, the previous two panel  
18:03:01 6 members who went against you must be  
18:03:04 7 corrupt liars?

18:03:05 8 A. It is my testimony that  
18:03:06 9 somebody is lying, sir.

18:03:08 10 Q. When you took blood tests  
18:03:16 11 for the team was it Dr. Demir who often  
18:03:19 12 took your blood?

18:03:19 13 A. It depended on who the  
18:03:21 14 doctor was at the race.

18:03:23 15 Q. Did she have responsibility  
18:03:25 16 for monitoring your health during the  
18:03:28 17 tour?

18:03:29 18 A. Health as in -- as it  
18:03:32 19 applies to my ability to race, yes.

18:03:34 20 Q. I also learned in the book  
18:03:39 21 she's the one who gave you the famous  
18:03:41 22 Jack Daniels after stage 16 as well?

18:03:43 23 A. You know, some people end up  
18:03:45 24 at the wrong place at the wrong time.

18:03:46 25 Q. She's the one who gave you

1 FLOYD LANDIS - CROSS

18:03:48 2 the injection the morning of stage 17  
18:03:50 3 as well?

18:03:50 4 A. What injection did I get in  
18:03:52 5 the morning?

18:03:52 6 Q. You didn't have an injection  
18:03:54 7 on the morning of stage 17?

18:03:55 8 A. I don't recall which stages  
18:03:59 9 I have injections. Are you referring  
18:04:00 10 to the hip injections that I have?

18:04:02 11 Q. Let's back up because I  
18:04:03 12 don't think we got this on the record  
18:04:05 13 last time. What injections did you  
18:04:07 14 have during the tour?

18:04:10 15 A. I had injections,  
18:04:13 16 intraarticular injections into my hip  
18:04:15 17 for osteonecrosis which led to  
18:04:19 18 osteoarthritis. Those took place on  
18:04:23 19 various stages. I believe there were  
18:04:25 20 two of them and she did not do those  
18:04:27 21 injections, sir.

18:04:29 22 MR. SUH: Mr. Chair, I'd  
18:04:30 23 like to point out once again that  
18:04:31 24 counsel is raising issues which are not  
18:04:33 25 contained within the brief.

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18:04:38 2 MR. BARNETT: Same answer.

18:04:39 3 THE PRESIDENT: The

18:04:40 4 objection is noted, but I think it's

18:04:42 5 still on the credibility line so you

18:04:44 6 may proceed.

18:04:51 7 Q. So you believe that in

18:04:52 8 addition to the IV there were two other

18:04:54 9 times during the tour that you had

18:04:55 10 injections?

18:04:58 11 A. Well, now, I don't know what

18:05:00 12 your definition is of injection. I

18:05:02 13 suppose an IV is using a needle on a

18:05:06 14 tube. I believe the other injections

18:05:08 15 you're referring to and certainly the

18:05:09 16 ones I was referring to just now like I

18:05:11 17 said are intraarticular injections. I

18:05:13 18 could draw a picture. It's a long

18:05:15 19 needle and it goes into your hip from

18:05:17 20 here.

18:05:17 21 Q. Not something you forget

18:05:18 22 easily?

18:05:19 23 A. No, certainly not. But I

18:05:20 24 don't know I remember the date. The

18:05:22 25 days run together in the tour. So I

1 FLOYD LANDIS - CROSS

18:05:23 2 can't say exactly what date it was.

18:05:25 3 Q. What was your understanding  
18:05:26 4 of what was in those injections?

18:05:28 5 A. I know what was in those  
18:05:29 6 injections. I knew at the time that it  
18:05:32 7 was what the doctor told me as opposed  
18:05:34 8 to trying to say. Dexamethazone I  
18:05:38 9 believe, but I can't be sure about  
18:05:41 10 that. It's a steroid allowed under the  
18:05:46 11 -- under the exemption that you have a  
18:05:49 12 legitimate reason for it and I most  
18:05:51 13 certainly did, I have the x-rays to  
18:05:53 14 prove it.

18:05:53 15 Q. In the Cortisone family,  
18:05:55 16 these are the cortisone shots that are  
18:05:57 17 referred to?

18:05:57 18 A. Corticosteroid I think is  
18:05:59 19 probably a better word.

18:06:01 20 Q. Were you also taking  
18:06:04 21 injections for tramadol?

18:06:06 22 A. Yes, once in awhile if the  
18:06:08 23 pain would get out of control because  
18:06:10 24 the corticosteroids have a diminishing  
18:06:15 25 effect over time and certainly it sped



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18:06:17 2 up during the tour. Things are  
18:06:19 3 happening faster.

18:06:20 4 Q. Now we have the IV and the  
18:06:21 5 two corticosteroid injections. Am I  
18:06:24 6 not to under understand there were  
18:06:26 7 tramadol injections?

18:06:27 8 A. I don't know if they were  
18:06:29 9 injections. I had tramadol. It comes  
18:06:30 10 in a variety of ways. The injections I  
18:06:34 11 remember, as far as I know the ones in  
18:06:36 12 existence are the ones into my hip,  
18:06:38 13 specifically into my hip and there were  
18:06:39 14 several of those.

18:06:40 15 Q. Do you recall whether you  
18:06:41 16 listed tramadol on your form?

18:06:46 17 A. I didn't write on my form if  
18:06:48 18 there was a drug listed. I wasn't the  
18:06:52 19 one who wrote it.

18:06:53 20 Q. You signed and verified it,  
18:06:55 21 correct?

18:06:55 22 A. Yes, but I would never write  
18:06:57 23 it. The doctor would be there to  
18:06:59 24 verify what I may have taken, whether  
18:07:01 25 it was a painkiller. So far as I know,

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18:07:03 2 correct me if I'm wrong, tramadol is  
18:07:05 3 not a banned substance.

18:07:07 4 Q. And who did you trust to  
18:07:14 5 tell you what was in the tramadol  
18:07:15 6 injection?

18:07:16 7 A. Like I said, I don't recall  
18:07:18 8 if there were tramadol injections. I  
18:07:20 9 took tramadol.

18:07:22 10 Q. You think you may have taken  
18:07:23 11 it orally?

18:07:24 12 A. I know I took it orally at  
18:07:25 13 times. If there were injections -- if  
18:07:27 14 they were added into the other  
18:07:28 15 injection I got into my hip, it's a  
18:07:30 16 possibility. There were multiple  
18:07:32 17 substances in that, I don't know. Sir,  
18:07:34 18 I'm not a doctor. It's unfortunate  
18:07:36 19 that you didn't call Denise as a  
18:07:38 20 witness because she could probably  
18:07:40 21 explain.

18:07:41 22 Q. With respect to the  
18:07:46 23 Leadville race, you don't dispute that  
18:07:50 24 now that you've seen the facts that  
18:07:51 25 that was a sanctioned race, do you?

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18:07:54 2 A. I absolutely dispute it.

18:07:55 3 Q. It was a USA -- your

18:08:01 4 understanding was that US Cycling was

18:08:03 5 providing the insurance for that race,

18:08:05 6 correct?

18:08:05 7 A. That is how it was

18:08:06 8 characterized to me, absolutely.

18:08:07 9 Q. And did you ever call Sean

18:08:11 10 Petty to see if you were violating your

18:08:13 11 voluntary suspension by riding in a

18:08:15 12 sanctioned race?

18:08:16 13 A. No. But Ken Chlouber, the

18:08:19 14 director of the race, did in my

18:08:21 15 presence and clarified there was no

18:08:22 16 issue with it.

18:08:23 17 Q. Ken Chlouber called Sean

18:08:26 18 Petty?

18:08:26 19 A. Absolutely, the day before

18:08:27 20 the race and spoke with him personally.

18:08:30 21 Q. If Sean Petty doesn't recall

18:08:32 22 that, we need to add Sean Petty to the

18:08:35 23 liar list?

18:08:35 24 A. I don't know if he recalls

18:08:36 25 having spoken to him. When I agreed to

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18:08:38 2 race in this race which was publicized  
18:08:41 3 long before the first USADA hearing and  
18:08:43 4 I spoke with Ken Chlouber because I saw  
18:08:46 5 the indication there was some  
18:08:47 6 affiliation with USA Cycle, and I did  
18:08:50 7 not wish in any way to violate any  
18:08:53 8 unspoken agreement or otherwise that I  
18:08:56 9 have made to not race. Indeed, I had  
18:08:59 10 offered to race on a road team from  
18:09:02 11 teams who would have financed this  
18:09:04 12 entire defense, if you will, to race  
18:09:07 13 last year before my suspension began,  
18:09:10 14 but I chose not to because I preferred  
18:09:13 15 to wait and not to -- certainly not to  
18:09:16 16 aggravate the panel, but because I  
18:09:18 17 didn't know what the outcome was going  
18:09:19 18 to be and I didn't wish to extend it.

18:09:23 19 Q. Mr. Landis, you solicited  
18:09:26 20 funds for your defense from  
18:09:28 21 individuals, correct?

18:09:28 22 A. Yes.

18:09:30 23 Q. Some large donations, some  
18:09:32 24 small donations?

18:09:33 25 A. Yes, a variety.

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18:09:35 2 Q. Charged people for

18:09:37 3 photographs, autographs --

18:09:39 4 THE PRESIDENT: Excuse me,

18:09:41 5 Mr. Barnett, what would be the

18:09:43 6 relevancy of how Mr. Landis goes about

18:09:45 7 raising funds for his defense? I'm

18:09:47 8 struggling to see what that could bear

18:09:50 9 upon.

18:09:50 10 MR. BARNETT: If you'll

18:09:54 11 permit me one question, I'll go right

18:09:57 12 to the heart of why I think it's

18:09:58 13 relevant.

18:10:02 14 MR. SUH: Why don't we

18:10:03 15 proffer the question.

18:10:04 16 MR. BARNETT: The question

18:10:05 17 is isn't it true that because you

18:10:06 18 collected funds based on the premises

18:10:08 19 that you did not do, you are now

18:10:11 20 prohibited from telling the truth here

18:10:13 21 today because you're concerned about

18:10:14 22 civil liability?

18:10:15 23 THE PRESIDENT: Well, that

18:10:18 24 is a speculative question, but it's so

18:10:23 25 speculative that I don't think we'd be

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18:10:25 2 assisted by any answer.

18:10:33 3 MR. BARNETT: Fair enough.

18:10:34 4 Q. Isn't it true that the  
18:10:36 5 indignation you feel about this event  
18:10:38 6 is really because you know there were  
18:10:39 7 other riders doping right along with  
18:10:41 8 you in the Tour de France who didn't  
18:10:43 9 get caught?

18:10:44 10 A. How -- I don't understand  
18:10:47 11 where that presumption comes from.  
18:10:49 12 What indication did I give you of that?

18:10:52 13 Q. You believe you were the  
18:10:56 14 best rider on that day doped or  
18:10:58 15 otherwise and you're upset that you're  
18:11:00 16 the only one that got caught, isn't  
18:11:01 17 that true?

18:11:02 18 A. I was the best rider on that  
18:11:03 19 day and I was not doped. I think  
18:11:05 20 that's certainly indisputed I was the  
18:11:07 21 best rider on that day. I was the best  
18:11:09 22 rider in the entire race.

18:11:12 23 MR. BARNETT: Nothing  
18:11:13 24 further.

18:11:14 25 THE PRESIDENT: Any

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18:11:15 2 examination?

18:11:16 3 MR. SUH: No.

18:11:17 4 THE PRESIDENT: Mr. Landis,  
18:11:18 5 in CAS cases there's a tradition that  
18:11:22 6 the panel always ask the athlete if  
18:11:24 7 they want to say anything to the panel.  
18:11:26 8 You don't have to, but it's a courtesy  
18:11:28 9 that we always show. So we're  
18:11:32 10 following the usual tradition and  
18:11:33 11 asking if you want to. It's a way of  
18:11:35 12 saying that it's your case, ultimately  
18:11:38 13 not the lawyers' case, if there's  
18:11:40 14 anything you want to add, we'll be  
18:11:41 15 happy to listen to it.

18:11:44 16 THE WITNESS: I think most  
18:11:45 17 of it will probably fall under the  
18:11:46 18 category of flattery which was probably  
18:11:50 19 already ruled out. I appreciate your  
18:11:51 20 taking your Easter weekend, put it that  
18:11:54 21 way.

18:11:54 22 THE PRESIDENT: Very well,  
18:11:55 23 you're free to resume your seat. Thank  
18:11:57 24 you very much.

18:11:58 25 THE WITNESS: Thank you.

1 P R O C E E D I N G S

18:12:16 2 THE PRESIDENT: I know time  
18:12:17 3 is getting on, but what we'd like to do  
18:12:19 4 is just go through some of these more  
18:12:23 5 legal issues, not necessarily decide  
18:12:25 6 them, but just see where we are on some  
18:12:27 7 of these matters.

18:12:28 8 And anybody who doesn't feel  
18:12:32 9 at this hour that they want to be  
18:12:33 10 stimulated by listening to legal  
18:12:35 11 arguments is free to leave and it won't  
18:12:37 12 be regarded as a discourtesy if you do  
18:12:40 13 so.

18:12:42 14 MR. BARNETT: I assume, Mr.  
18:12:43 15 Chair, that doesn't include us.

18:12:47 16 THE PRESIDENT: If you want  
18:12:48 17 to leave your junior here to do it  
18:12:50 18 while you go, that's up to you.

18:12:52 19 Just looking at what we have  
18:13:32 20 here, we have already I think dealt  
18:13:37 21 with item 1 about Dr. de Ceaurriz. I'm  
18:13:41 22 frightened as to whether pronunciation  
18:13:43 23 is correct, but I hope it is. So we  
18:13:45 24 don't have to discuss that. We've made  
18:13:47 25 our ruling about Dr. Davis.



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18:13:48 2 The only that is outstanding  
18:13:51 3 here, Mr. Young, is whether you want  
18:13:57 4 to, as I think you may have done last  
18:13:59 5 time, indicate any particular  
18:14:01 6 procedures for us to consider in  
18:14:04 7 relations to that. I mean it's  
18:14:06 8 basically for the expert to do it. But  
18:14:07 9 what we don't have is interruptions  
18:14:11 10 protesting some procedure's being  
18:14:14 11 followed that is outside what was  
18:14:15 12 anticipated or whatever. So is there  
18:14:17 13 anything you want to say about that?  
18:14:19 14 We'd rather hear about it in advance  
18:14:21 15 than during the process.

18:14:22 16 MR. YOUNG: I think that's  
18:14:23 17 appropriate, Mr. Chair. What we'd like  
18:14:25 18 to do is to have Dr. Davis do a  
18:14:28 19 demonstration of what he proposes to do  
18:14:33 20 in front of our experts so they can  
18:14:38 21 comprehend it and report it back to us.  
18:14:41 22 And then if our experts want to use the  
18:14:50 23 instrument or if they want to do a  
18:14:52 24 demonstration that they be allowed to  
18:14:54 25 do that. Again, not knowing. And

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18:14:58 2 also, we need some sort of verification  
18:15:04 3 that this really is the instrument that  
18:15:07 4 was used by LNDD with the right  
18:15:10 5 software and the like because that  
18:15:12 6 issue came up the last time and  
18:15:14 7 Dr. Davis represented that it was the  
18:15:16 8 identical software and then the panel's  
18:15:18 9 expert, Dr. Botre pointed out that it  
18:15:22 10 wasn't. So we just need Dr. Davis to  
18:15:25 11 button up that identity.

18:15:29 12 THE PRESIDENT: Mr. Suh, can  
18:15:30 13 you tell me when Dr. Davis is expected  
18:15:32 14 to testify?

18:15:35 15 MR. SUH: Well, I think  
18:15:36 16 that's probably a good issue to take up  
18:15:38 17 as a preliminary matter, because I'm  
18:15:40 18 not sure how long he's going to take on  
18:15:48 19 cross examination.

18:15:50 20 THE PRESIDENT: In the  
18:15:50 21 normal course would he be coming up  
18:15:52 22 tomorrow or the next day, or when did  
18:15:54 23 you have in mind?

18:15:55 24 MR. SUH: Well, we only have  
18:15:57 25 three witnesses left. Dr. Davis, Keith

## 1 P R O C E E D I N G S

18:16:02 2 Goodman and John Amory. And so I think  
18:16:07 3 if the crosses go at about the expected  
18:16:10 4 rate that they are going now, almost  
18:16:13 5 assuredly we're going to get through to  
18:16:16 6 Dr. Davis by tomorrow. In fact, the  
18:16:18 7 parallel issue I wanted to raise was I  
18:16:20 8 think it would be appropriate before we  
18:16:22 9 leave tonight to get a sense of who is  
18:16:24 10 going to be called as a witness on the  
18:16:26 11 other side in terms of cross  
18:16:28 12 examination, especially if we have to  
18:16:29 13 arrange for a French interpreter. We  
18:16:33 14 have informed the interpreter that we  
18:16:37 15 would need -- we won't need  
18:16:40 16 interpretation services until Friday on  
18:16:42 17 the assumption we were going to take  
18:16:44 18 all the way through the end of Thursday  
18:16:46 19 under the proposed schedule. It looks  
18:16:48 20 like we may get through everybody, all  
18:16:50 21 of our witnesses and then start with  
18:16:52 22 their witnesses. If we start with  
18:16:54 23 French speaking witnesses, then we  
18:16:56 24 would certainly need the services of an  
18:16:57 25 interpreter by say tomorrow afternoon

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18:17:00 2 sometime. But we would envision

18:17:06 3 Dr. Davis going sometime tomorrow.

18:17:08 4 THE PRESIDENT: Is he here  
18:17:09 5 in town at the moment?

18:17:12 6 MR. SUH: Yes, he was here.

18:17:14 7 THE PRESIDENT: He was here,  
18:17:15 8 I remember seeing him. He's still  
18:17:17 9 here. Is it possible for there to be a  
18:17:21 10 meeting with whoever Mr. Young has in  
18:17:25 11 mind on his side so that we can --

18:17:31 12 MR. SUH: Certainly we can  
18:17:32 13 arrange for a meeting.

18:17:35 14 THE PRESIDENT: We'd be most  
18:17:36 15 grateful if counsel would arrange for  
18:17:39 16 that to happen and come back and then  
18:17:40 17 we'll hear from you both as to what, if  
18:17:42 18 anything, we need to say in advance of  
18:17:45 19 him proceeding.

18:17:47 20 MR. SUH: Okay. As to the  
18:17:49 21 scheduling matter?

18:17:52 22 THE PRESIDENT: I haven't  
18:17:53 23 studied the schedule that our secretary  
18:17:58 24 provided you today. And I don't know  
18:17:59 25 whether that is a good forecast of what

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18:18:07 2 is going to happen. But what you are  
18:18:08 3 saying is when will you be expected to  
18:18:11 4 be starting to cross examine, is that  
18:18:13 5 what you're looking for?

18:18:15 6 MR. SUH: And in particular  
18:18:16 7 who.

18:18:16 8 THE PRESIDENT: And the  
18:18:17 9 order. Mr. Young, can you tell us  
18:18:20 10 whether that schedule we handed out  
18:18:24 11 without estimations, or at least our  
18:18:27 12 secretary's estimations, shows the  
18:18:29 13 likely order of witnesses.

18:18:30 14 MR. BARNETT: If I can ask  
18:18:32 15 Mr. Suh, are you keeping the same order  
18:18:34 16 in terms of Dr. Amory, Dr. Davis,  
18:18:38 17 Dr. Goodman?

18:18:40 18 MR. SUH: Yes, I believe so.  
18:18:42 19 Our expectation is that John Amory will  
18:18:44 20 be here by tomorrow morning so he can  
18:18:47 21 start first thing in the morning. If  
18:18:48 22 he's not --

18:18:50 23 MR. BARNETT: It will be  
18:18:51 24 Dr. Davis.

18:18:53 25 MR. SUH: Or Keith Goodman.

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18:18:54 2 They're all here. We only have three  
18:18:56 3 left. I assume John will be here early  
18:18:58 4 enough to start at 9 a.m.

18:19:01 5 MR. BARNETT: The proposed  
18:19:02 6 schedule after that which is based on  
18:19:03 7 the order we sent in is a series of  
18:19:05 8 French witnesses. Unfortunately, that  
18:19:07 9 started with the video conference  
18:19:09 10 witnesses for Friday morning which we  
18:19:11 11 need to leave as Friday.

18:19:14 12 MR. RIVKIN: Who would you  
18:19:15 13 move up to tomorrow afternoon if you're  
18:19:17 14 able to start tomorrow?

18:19:18 15 MR. BARNETT: I believe we'd  
18:19:19 16 start with Ms. Mongongu if we get to  
18:19:22 17 her tomorrow afternoon.

18:19:24 18 MR. SUH: And if we get  
18:19:25 19 through her?

18:19:27 20 MR. BARNETT: We would  
18:19:28 21 follow that order of Ms. Frelat.

18:19:31 22 MR. SUH: If we get through  
18:19:32 23 her we'll be in the order.

18:19:34 24 MR. BARNETT: If we get  
18:19:35 25 through her we'll be doing good. Dr.

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18:19:38 2 Buisson would be the third. Wherever  
18:19:41 3 we're at Friday morning we'll go back  
18:19:43 4 to the French witnesses.

18:19:45 5 MR. SUH: We need to make  
18:19:46 6 arrangements to have the interpreter  
18:19:48 7 here by tomorrow afternoon.

18:19:50 8 THE PRESIDENT: She was here  
18:19:51 9 this morning.

18:19:55 10 MR. SUH: She was here I  
18:19:56 11 think in error.

18:20:04 12 MS. MARTINEZ LOPEZ: The  
18:20:05 13 parties have the information to contact  
18:20:07 14 the interpreter, right?

18:20:08 15 MR. SUH: We'll reach out to  
18:20:10 16 her.

18:20:12 17 THE PRESIDENT: Will you do  
18:20:13 18 that. That would be very good. And  
18:20:25 19 Mr. Leguy who gave the accreditation  
18:20:29 20 statement, when will he be fit in?

18:20:33 21 MR. YOUNG: We're still  
18:20:34 22 trying to confirm that for sure, but it  
18:20:35 23 looks like Monday.

18:20:38 24 MR. SUH: We would request  
18:20:39 25 that he be -- his testimony be taken by

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18:20:43 2 video teleconference.

18:20:46 3 THE PRESIDENT: Is that  
18:20:46 4 feasible?

18:20:48 5 MR. YOUNG: He's going to  
18:20:49 6 traveling. He's on holiday in France.  
18:20:51 7 So he's going to be someplace on his  
18:20:54 8 cell phone.

18:20:55 9 THE PRESIDENT: Because it's  
18:20:56 10 the Easter vacation, he's on holiday.

18:20:59 11 MR. SUH: How will we be  
18:21:01 12 able to show him exhibits?

18:21:06 13 MR. YOUNG: If you want  
18:21:09 14 particular -- if you want him to have  
18:21:12 15 particular exhibits available then we  
18:21:17 16 need to let him know that. So if  
18:21:21 17 you'll tell us what exhibits that he  
18:21:25 18 would have in his files at COFRAC or if  
18:21:29 19 there are any other exhibits that you  
18:21:31 20 want him to have, then we need to  
18:21:33 21 figure out a way to PDF those exhibits  
18:21:38 22 to him.

18:21:39 23 MR. PAULSSON: What city  
18:21:40 24 will he be close to?

18:21:42 25 MR. YOUNG: I think COFRAC



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18:21:43 2 is in Paris, but I have no idea where  
18:21:46 3 he's -- I have no idea where he's going  
18:21:49 4 on holiday.

18:21:50 5 MR. RIVKIN: Can you let us  
18:21:51 6 know tomorrow morning when we start  
18:21:52 7 because if he's anywhere near Paris we  
18:21:55 8 can arrange for him to come into our  
18:21:58 9 office.

18:21:59 10 MR. YOUNG: If he's in Paris  
18:22:00 11 I think it would be easy.

18:22:02 12 MR. RIVKIN: If he's somewhere  
18:22:04 13 else we could find a way to fax or PDF  
18:22:08 14 the exhibits in advance so he can have  
18:22:12 15 them.

18:22:13 16 MR. SUH: Here's the  
18:22:14 17 problem. The importance of this  
18:22:15 18 witness in connection with the  
18:22:17 19 accreditation can't be understated.  
18:22:19 20 He's going to say all the statements we  
18:22:21 21 have are okay and the statement we have  
18:22:22 22 is a letter written in English, as the  
18:22:24 23 panel pointed out, written just a short  
18:22:27 24 while ago. I'm not exactly sure what  
18:22:29 25 all the exhibits we would necessarily

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18:22:30 2 need to raise. To cross examine a  
18:22:32 3 witness of this importance on his cell  
18:22:36 4 phone in the middle of his holiday  
18:22:38 5 without the ability to get him exhibits  
18:22:40 6 is --

18:22:41 7 THE PRESIDENT: We would  
18:22:42 8 certainly want to do everything  
18:22:43 9 possible to strive for a video  
18:22:46 10 conference, so let's see if we can  
18:22:48 11 pursue that before we take any other  
18:22:51 12 alternatives.

18:22:51 13 MR. SUH: We'll certainly  
18:22:52 14 attempt to get exhibits, in fact,  
18:22:57 15 attempt to get him exhibits more than  
18:22:59 16 we would probably anticipate needing so  
18:23:01 17 that we are not in a situation where we  
18:23:03 18 have to fax him exhibits midway  
18:23:06 19 through, but of course we would request  
18:23:08 20 the panel's assistance in this regard.

18:23:11 21 MR. BARNETT: On a related  
18:23:12 22 note, if we could have the same  
18:23:14 23 cooperation as to some of the minor, in  
18:23:17 24 terms of time slots, the chain of  
18:23:20 25 custody witnesses, because of the

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18:23:21 2 holiday a lot of those people will not  
18:23:24 3 be able to come into the French lab on  
18:23:25 4 Saturday or Monday when we get to them.  
18:23:27 5 We have a general feel for the chain of  
18:23:29 6 custody exhibits you'd like in front of  
18:23:31 7 them, but if there are additional  
18:23:33 8 documents it would help to know by  
18:23:35 9 witness so we can make a good effort to  
18:23:37 10 get it to them.

18:23:38 11 MR. SUH: For those  
18:23:39 12 witnesses who are not present, we'll  
18:23:42 13 make every effort, it's in our own  
18:23:44 14 interests to get exhibits in front of  
18:23:47 15 them so we don't have a mid-examination  
18:23:49 16 faxing issue. It would be -- of course  
18:23:51 17 by video teleconference it does make it  
18:23:53 18 easy because I believe we can show  
18:23:55 19 exhibits on a screen and it can be  
18:23:57 20 transmitted over the screen to the  
18:23:59 21 other person.

18:24:00 22 MR. RIVKIN: Maybe.

18:24:09 23 MR. SUH: I know in our  
18:24:10 24 video teleconference we do have the  
18:24:12 25 feature that allows the showing of a

1 P R O C E E D I N G S

18:24:16 2 picture in picture within the screen.

18:24:20 3 MR. RIVKIN: We'll check

18:24:21 4 with our technical person in the

18:24:23 5 morning. I haven't used that

18:24:24 6 technology here.

18:24:38 7 THE PRESIDENT: Does anybody

18:24:40 8 else want to say anything about those

18:24:41 9 two topics before we move on? The

18:24:45 10 other motions, there are competing

18:24:55 11 motions about exhibits which we will

18:24:57 12 need to deal with not this evening, but

18:25:00 13 I'm just listing, that each side seeks

18:25:02 14 to strike out exhibits from the other

18:25:04 15 side.

18:25:06 16 There is also the

18:25:10 17 Appellant's motion to strike out the

18:25:13 18 untimely appeal. And I should give the

18:25:21 19 provisional view which is based on the

18:25:25 20 experience of the tribunal. This is, I

18:25:29 21 stress, a provisional view, that

18:25:34 22 apparently in the past in CAS cases the

18:25:36 23 situation has arisen and the approach

18:25:39 24 that's been taken, and it was taken in

18:25:41 25 some olympic cases, is that it's a

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18:25:45 2 matter within the jurisdiction of the  
18:25:47 3 tribunal and that the -- in cases where  
18:25:52 4 it's arisen, it has been permitted  
18:25:54 5 without the filing of a specific  
18:25:58 6 appeal. Whether that rates as anything  
18:26:02 7 other than just CAS practice I'm not  
18:26:08 8 sure. My colleagues are far more  
18:26:09 9 experienced than I am. Maybe -- would  
18:26:12 10 you like to mention the olympic --

18:26:15 11 MR. RIVKIN: One case that  
18:26:16 12 comes readily to mind is the Jovanovich  
18:26:19 13 case which was a US athlete, now I'm  
18:26:24 14 trying to remember, bobsledder I think,  
18:26:26 15 who had a sanction of less than two  
18:26:28 16 years who appealed it in order to have  
18:26:31 17 the sanction reduced immediately at the  
18:26:35 18 beginning of the Olympics in a way that  
18:26:37 19 would have allowed him to participate  
18:26:39 20 in the Olympics, and the panel, since  
18:26:42 21 it was a de novo hearing found that he  
18:26:46 22 had -- that he was guilty of doping and  
18:26:51 23 that there were no exceptional  
18:26:53 24 circumstances to warrant a reduction  
18:26:54 25 beyond the -- reduction of to less than

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18:26:59 2 the two years mandated by the rules and  
18:27:01 3 therefore imposed a full two-year  
18:27:03 4 sanction.

18:27:03 5 There was no separate appeal  
18:27:05 6 in that matter. And I know that there  
18:27:07 7 are other similar CAS cases where once  
18:27:11 8 it's been presented to a panel it is  
18:27:14 9 entirely de novo, and it's up to the  
18:27:16 10 panel, if we find Mr. Landis guilty of  
18:27:21 11 doping, to determine what the  
18:27:24 12 appropriate sanction is. And that  
18:27:30 13 would include taking -- whether we take  
18:27:32 14 into account or not this race.

18:27:36 15 MR. SUH: Is this the  
18:27:37 16 panel's ruling now, or are we --

18:27:39 17 MR. PAULSSON: Such is also  
18:27:41 18 my independent understanding. I don't  
18:27:43 19 think we're making a ruling, but we're  
18:27:45 20 expressing a view.

18:27:45 21 MR. RIVKIN: There are cases  
18:27:46 22 to that effect and I'm not aware of any  
18:27:49 23 cases that the panel doesn't have the  
18:27:53 24 right to do that.

18:27:55 25 MR. BARNETT: Can I also

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18:27:57 2 confirm because I think there was some  
18:27:59 3 question in the email correspondence  
18:28:01 4 that you did receive our motion where  
18:28:03 5 we discussed the USADA protocol which  
18:28:05 6 expressly says that point.

18:28:09 7 THE PRESIDENT: To be  
18:28:09 8 honest, we haven't done anything more  
18:28:13 9 than talk about this and the results of  
18:28:16 10 what you've heard today. It may be  
18:28:21 11 right to say, I don't know, that the  
18:28:24 12 matter wasn't fully argued in those  
18:28:26 13 cases because of the olympic one would  
18:28:29 14 be on the run I suppose. If you want  
18:28:31 15 to, Mr. Suh, make any further  
18:28:33 16 submissions, we're perfectly happy to  
18:28:36 17 hear you.

18:28:37 18 And we thought we'd give you  
18:28:40 19 that indication based upon what we know  
18:28:42 20 about the practice in fairness rather  
18:28:46 21 than dumping it on you.

18:28:47 22 We, if you want to take us  
18:28:50 23 through it again and based on the brief  
18:28:55 24 you've done we're quite happy to  
18:28:56 25 consider that, and we will do that. So

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18:28:59 2 it is true that we've got the  
18:29:01 3 provisional view based on what we  
18:29:03 4 understand has happened in other cases  
18:29:04 5 and the particular case that Mr. Rivkin  
18:29:08 6 mentioned we would be in a position to  
18:29:11 7 get for you so you can have a look at  
18:29:13 8 it. So on the other hand, if you want  
18:29:16 9 to have us hear from both sides arguing  
18:29:23 10 orally before we finally decide, we're  
18:29:25 11 very happy to do that. Why don't we  
18:29:28 12 proceed on the basis. We'll try and  
18:29:29 13 get you that case, you can have a look  
18:29:31 14 at it and then if you tell us you want  
18:29:33 15 to argue it then we will certainly hear  
18:29:35 16 you again. And who knows, you might  
18:29:37 17 persuade us that there is error  
18:29:40 18 communis, that there are some decisions  
18:29:42 19 all of them made on a misunderstanding  
18:29:44 20 or quite wrong. The only thing that  
18:29:46 21 would be dangerous in doing that is  
18:29:49 22 that Mr. Rivkin was in one of them, you  
18:29:50 23 see.

18:29:51 24 MR. RIVKIN: Actually, I  
18:29:52 25 wasn't on the Jovanovich case because



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18:29:55 2 it involved an American athlete.

18:30:00 3 THE PRESIDENT: But I think

18:30:01 4 it's that matter which we won't

18:30:04 5 determine this evening.

18:30:04 6 And then there are two

18:30:05 7 competing strike-out matters on

18:30:07 8 exhibits, and speaking for myself, I'm

18:30:09 9 not sure that those are inviting topics

18:30:11 10 to be discussing at this hour, but we

18:30:13 11 will find some time maybe tomorrow

18:30:16 12 because we're going quite well at the

18:30:19 13 moment, where we can hear you both

18:30:21 14 briefly on the exhibits issue.

18:30:31 15 And tomorrow, in terms of

18:30:32 16 the program, one member of the tribunal

18:30:34 17 has an important commitment and we want

18:30:39 18 to extend the lunch hour from, it was

18:30:43 19 going to be from 1 o'clock to ten past

18:30:47 20 two. We want to make it from one

18:30:48 21 o'clock to 2:30. So if you wouldn't

18:30:51 22 mind noting that we promise to make up

18:30:56 23 that time at the end of the day or in

18:30:58 24 some way. But it would be appreciated

18:31:03 25 if you would just note that the lunch

1 P R O C E E D I N G S

18:31:07 2 tomorrow will be from one to 2:30.

18:31:10 3 MR. SUH: Starting at nine?

18:31:12 4 THE PRESIDENT: Yes. Do any

18:31:14 5 counsel have any other matters they

18:31:16 6 wish issue to raise before we adjourn?

18:31:18 7 MR. BARNETT: No.

18:31:19 8 MR. YOUNG: No.

18:31:20 9 THE PRESIDENT: Mr. Suh?

18:31:21 10 MR. SUH: No.

18:31:22 11 THE PRESIDENT: Thank you

18:31:22 12 all very much. We'll see you at nine

18:31:24 13 in the morning.

18:31:25 14 (Time noted: 6:31 p.m.)

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[illegible]

I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify that the foregoing proceedings were taken before me on March 19, 2008;

That the within transcript is  
a true record of said proceedings;

That I am not connected by blood or marriage with any of the parties herein nor interested directly or indirectly in the matter in controversy, nor am I in the employ of the counsel.

IN WITNESS WHEREOF, I have  
hereunto set my hand this \_\_\_\_ day of  
\_\_\_\_\_, 2008.

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| 5  | B. GOLDBERGER | 262 | 274   | 300 |     |
| 6  |               |     |       |     |     |
| 7  | FLOYD LANDIS  | 310 | 311   |     |     |
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IN THE COURT OF ABRITRATION FOR SPORT  
-----x

FLOYD LANDIS,

Appellant,

v.

CAS 2007/A/2394

UNITED STATES ANTI-DOPING AGENCY,

Respondent.

-----x

VOLUME 2

March 20, 2008

9:06 a.m.

BEFORE:

MR. DAVID A.R. WILLIAMS, President

MR. JAN PAULSSON, Arbitrator

MR. DAVID RIVKIN, Arbitrator

REPORTED BY: GAIL F. SCHORR, C.S.R.

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13 PAUL SCOTT

14 KEITH GOODMAN

15 JOHN AMORY

16 SIMON DAVIS

17 ARNIE BAKER

18 TODD THOMPSON

19 LARRY BOWERS

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09:05:26 2 P R O C E E D I N G S

09:06:35 3 THE PRESIDENT: Good morning,  
09:06:35 4 everybody. I just have a few  
09:06:38 5 administrative matters to mention before  
09:06:41 6 we hear some more evidence.

09:06:46 7 First of all, just to record  
09:06:48 8 documents that have been received  
09:06:52 9 recently, USADA's response concerning the  
09:06:56 10 testimony of Dr. Meier-Augenstein. Can I  
09:07:01 11 just say if either counsel hasn't got any  
09:07:04 12 of these documents just say so and we'll  
09:07:07 13 fix that. Mr. Suh, have you received  
09:07:12 14 that?

09:07:13 15 MR. SUH: Yes.

09:07:15 16 THE PRESIDENT: Just on that  
09:07:16 17 matter, has the medical report yet been  
09:07:19 18 given to Mr. Young?

09:07:20 19 MR. SUH: Not yet. We have  
09:07:21 20 it here this morning. We received an  
09:07:23 21 additional document from Dr. Meier-  
09:07:26 22 Augenstein last night which we haven't  
09:07:28 23 had time to make part of the exhibit.  
09:07:30 24 If we could actually email it to  
09:07:32 25 somebody here in this office and they

1 P R O C E E D I N G S

09:07:34 2 could print it and copy, we could  
09:07:36 3 attach it to the back of what we've  
09:07:38 4 already prepared.

09:07:39 5 MR. RIVKIN: If you email it  
09:07:41 6 to me I'll have my secretary print it  
09:07:43 7 off and bring it down.

09:07:47 8 MR. SUH: I'll do that right  
09:07:48 9 now.

09:07:49 10 THE PRESIDENT: Very well.  
09:07:50 11 And then once we receive it we will  
09:07:52 12 have our secretary deliver, as  
09:07:59 13 arranged, to Mr. Young pursuant to the  
09:08:01 14 ruling yesterday.

09:08:01 15 MR. SUH: I have copies for  
09:08:02 16 the panel and Mr. Young. I just don't  
09:08:04 17 have copies of what we received. We  
09:08:06 18 got it late last night.

09:08:11 19 THE PRESIDENT: The second  
09:08:13 20 thing that has been received by email  
09:08:16 21 last evening is USADA's response to  
09:08:18 22 appellant's motion to strike untimely  
09:08:22 23 exhibits and related testimony. We  
09:08:25 24 note that it has been received and  
09:08:26 25 we'll find an appropriate time to hear

1 P R O C E E D I N G S

09:08:28 2 that argument later.

09:08:29 3 The third matter is we  
09:08:34 4 promised to find the award from the CAS  
09:08:38 5 during the Olympics about the ability  
09:08:41 6 of a respondent on appeal to seek an  
09:08:45 7 increase in sentence. And I think  
09:08:55 8 that's been handed to you. Have you  
09:08:57 9 got a copy of the Jovanovich case?

09:09:00 10 MR. SUH: Yes, we have it.

09:09:02 11 THE PRESIDENT: Could I  
09:09:03 12 direct your attention to the relevant  
09:09:05 13 paragraph, which is paragraph 55. It  
09:09:14 14 starts under the heading "Sanction."  
09:09:25 15 It's fair to note that the Appellant's  
09:09:27 16 counsel conceded, conceded that there  
09:09:31 17 was jurisdiction and of the panel to  
09:09:36 18 increase the sentence, but the last two  
09:09:39 19 sentences in paragraph 55 seem to  
09:09:41 20 indicate that it was also separately  
09:09:47 21 and independently the view of the  
09:09:49 22 tribunal that that was permissible. I  
09:09:53 23 say no more about that except just to  
09:09:55 24 invite counsel to consider that and  
09:09:57 25 we'll return to that topic at a later

1 P R O C E E D I N G S

09:10:01 2 stage.

09:10:05 3 MR. RIVKIN: I believe there  
09:10:06 4 are other cases that were heard on a de  
09:10:09 5 novo basis where the timing was varied  
09:10:13 6 and Jovanovich simply came to mind. I  
09:10:23 7 know in the Tyler Hamilton case which  
09:10:25 8 has also been given to you too that the  
09:10:28 9 panel came to a different conclusion as  
09:10:29 10 to when the sentence ought to run from  
09:10:32 11 than the original panel, and that had  
09:10:34 12 nothing to do with an appeal. That was  
09:10:36 13 simply because it was a de novo  
09:10:40 14 proceeding.

09:10:43 15 MR. SUH: Perhaps if we  
09:10:44 16 could take a few minutes to look at  
09:10:46 17 them.

09:10:46 18 THE PRESIDENT: We're not  
09:10:47 19 asking you to do anything now. We're  
09:10:48 20 just providing that to you, and we'll  
09:10:50 21 come back to that.

09:10:52 22 MR. SUH: Thank you very  
09:10:53 23 much.

09:10:54 24 THE PRESIDENT: Finally,  
09:10:55 25 yesterday's time allocation so that you

1 P R O C E E D I N G S

09:10:56 2 know how you're doing. There's a  
09:10:59 3 one-pager, I don't know if you've  
09:11:00 4 received that yet. We'll just hand  
09:11:03 5 that around now.

09:11:04 6 MS. MARTINEZ LOPEZ: I  
09:11:05 7 actually do not have copies for  
09:11:06 8 everybody, but I will provide that on  
09:11:08 9 the break.

09:11:08 10 THE PRESIDENT: That will  
09:11:09 11 come to you on the break. Which shows  
09:11:14 12 that, as a matter of passing interest,  
09:11:16 13 that USADA used 3 hours 33 minutes  
09:11:19 14 yesterday and Mr. Landis 2 hours 38  
09:11:25 15 minutes.

09:11:25 16 Now, passing to today's  
09:11:29 17 program, my understanding is that  
09:11:31 18 Dr. Amory is now ready to give his  
09:11:33 19 evidence; is that correct?

09:11:34 20 MR. WEISS: Mr. Chair, if I  
09:11:36 21 may interrupt for one second. We have  
09:11:38 22 also supplied to your assistant's table  
09:11:41 23 the second request for documents and  
09:11:42 24 the response to the second request for  
09:11:44 25 documents.

1 P R O C E E D I N G S

09:11:45 2 THE PRESIDENT: Thank you  
09:11:46 3 very much. I did see that. It's much  
09:11:48 4 obliged. Thank you.

09:11:49 5 Dr. Amory, is he coming  
09:11:57 6 forward?

09:11:57 7 MR. SUH: He's right here.

09:11:59 8 Mr. Rivkin, let me email  
09:12:00 9 this to you during a break.

09:12:02 10 MR. RIVKIN: Okay.

09:12:13 11 THE PRESIDENT: Good  
09:12:36 12 morning, Dr. Amory.

09:12:38 13 MR. AMORY: Good morning.

09:12:39 14 THE PRESIDENT: The first  
09:12:40 15 thing I need to do is ask you to  
09:12:42 16 declare and affirm that the expert  
09:12:44 17 opinions you tender to the tribunal  
09:12:46 18 will be your honest opinion.

09:12:48 19 MR. AMORY: Correct, they  
09:12:48 20 are.

09:12:51 21 THE PRESIDENT: In terms of  
09:12:52 22 procedure, since you weren't here  
09:12:53 23 yesterday, let me just tell you how  
09:12:55 24 we're going to proceed. First of all,  
09:12:59 25 who will be leading the witness? Mr.

1 P R O C E E D I N G S

09:13:03 2 Suh, are you leading this witness?

09:13:05 3 MR. SUH: Yes. In fact,

09:13:06 4 I'll be handling all the witnesses.

09:13:09 5 THE PRESIDENT: Very good.

09:13:10 6 We'll begin with Mr. Suh who will show  
09:13:13 7 you your statement and allow you if you  
09:13:16 8 need to to make any corrections of  
09:13:18 9 typos or that kind of thing. And then  
09:13:20 10 if he wishes, he can ask you to comment  
09:13:22 11 on any of the reply briefs that have  
09:13:25 12 commented on your evidence. When that  
09:13:30 13 is concluded, Mr. Young, will you be  
09:13:34 14 cross examining?

09:13:34 15 MR. YOUNG: I will.

09:13:36 16 THE PRESIDENT: Mr. Young  
09:13:37 17 here will ask you questions on cross  
09:13:39 18 examination. Mr. Suh will then have  
09:13:41 19 the right to ask follow-up questions  
09:13:44 20 and reexamination and it's possible  
09:13:46 21 that we may have some questions for  
09:13:48 22 you.

09:13:49 23 THE WITNESS: Great.

09:13:50 24 THE PRESIDENT: If at any  
09:13:52 25 point in your examination you're shown

1 P R O C E E D I N G S

09:13:54 2 a document you haven't seen before or  
09:13:55 3 you haven't seen for a fair while and  
09:13:57 4 you want to read it before you answer,  
09:13:59 5 we'll of course provide time for you to  
09:14:00 6 do that. Thank you very much.

09:14:02 7 MR. YOUNG: Mr. Chairman,  
09:14:03 8 just so that I understand our  
09:14:05 9 procedures, so whether or not witnesses  
09:14:07 10 filed replies of their own they will  
09:14:09 11 have an opportunity to comment on other  
09:14:12 12 people's replies?

09:14:13 13 THE PRESIDENT: Yes. If the  
09:14:14 14 replies bear on the evidence of the  
09:14:17 15 witness. In other words, if there is --

09:14:19 16 MR. YOUNG: Got it.

09:14:20 17 THE PRESIDENT: If any reply  
09:14:21 18 briefs have specifically mentioned Dr.  
09:14:24 19 Amory then it's perfectly in order for  
09:14:26 20 Mr. Suh to say before you commence, do  
09:14:28 21 you have any comments, just as happened  
09:14:31 22 yesterday with the witness.

09:14:32 23 MR. YOUNG: I understand it.  
09:14:33 24 Thank you.

09:14:35 25 THE PRESIDENT: Please



1 JOHN AMORY - DIRECT

09:14:35 2 proceed.

09:14:35 3 J O H N A M O R Y,

09:14:35 4 called as a witness on behalf of the

09:14:35 5 Respondent, having been first duly

09:14:35 6 sworn by the President, was examined

09:14:36 7 and testified as follows:

09:14:36 8 DIRECT EXAMINATION

09:14:38 9 BY MR. SUH:

09:14:38 10 Q. Good morning, Dr. Amory.

09:14:40 11 A. Good morning.

09:14:41 12 Q. Have you submitted a  
09:14:42 13 declaration in connection with this  
09:14:44 14 case?

09:14:44 15 A. Yes, I have.

09:14:44 16 Q. And do you now affirm that  
09:14:46 17 the contents of that declaration are  
09:14:48 18 all true and correct?

09:14:48 19 A. Yes, I do.

09:14:49 20 MR. SUH: I would actually  
09:14:51 21 turn it right over to cross  
09:14:52 22 examination.

09:15:19 23 CROSS EXAMINATION

09:15:20 24 BY MR. YOUNG:

09:15:20 25 Q. Good morning, Dr. Amory.

1 JOHN AMORY - CROSS

09:15:22 2 A. Good morning.

09:15:23 3 Q. Before this case is it fair  
09:15:28 4 to say that the only time in your  
09:15:30 5 career that you'd ever looked at a T/E  
09:15:33 6 ratio in urine was as a member of the  
09:15:38 7 USADA Anti-Doping Review Board?

09:15:40 8 A. Correct.

09:15:41 9 Q. And is it also fair to say  
09:15:42 10 that the only time you'd ever looked at  
09:15:47 11 the 5-alpha diol, the 5-beta diol or  
09:15:51 12 any IRMS result in urine was with that  
09:15:53 13 review board?

09:15:54 14 A. Yes.

09:15:55 15 Q. And I've gone back and  
09:15:58 16 checked, you were on two cases with  
09:16:04 17 that review board that had anything to  
09:16:06 18 do with testosterone?

09:16:07 19 A. Yes, that's correct.

09:16:13 20 Q. And in those cases, they both  
09:16:15 21 had positive IRMS finding, correct?

09:16:17 22 A. Yes.

09:16:18 23 Q. But neither one of them had  
09:16:21 24 a T/E confirmation, did they? I can --

09:16:29 25 A. You know, I'm not sure I

1 JOHN AMORY - CROSS

09:16:31 2 recall the detail of those cases.

09:16:32 3 Q. One was an IRMS positive and  
09:16:35 4 an EPO positive and there wasn't enough  
09:16:40 5 urine to do a T/E confirmation. Does  
09:16:44 6 that refresh your recollection?

09:16:46 7 A. I have a vague recollection  
09:16:47 8 of that, yes.

09:16:48 9 Q. And the other one was a case  
09:16:52 10 that I can use the name because it's a  
09:16:55 11 published opinion, Hartman, and there  
09:16:58 12 was no T/E confirmation in Hartman  
09:17:00 13 either, was there?

09:17:01 14 A. I can't remember the details  
09:17:02 15 of that case, I'm sorry.

09:17:03 16 Q. Let me ask it this way. In  
09:17:06 17 neither one of those cases was there  
09:17:08 18 any kind of longitudinal study that  
09:17:11 19 showed the T/E was this today and that  
09:17:15 20 before and that before and that before,  
09:17:18 21 was there?

09:17:18 22 A. I can't remember the details  
09:17:20 23 of those cases. They tell us to get  
09:17:22 24 rid of the paperwork regarding those  
09:17:25 25 cases, so.

1 JOHN AMORY - CROSS

09:17:38 2 Q. Have you personally ever  
09:17:41 3 done a study looking at testosterone or  
09:17:47 4 epitestosterone in urine?

09:17:50 5 A. Not in urine, no. In blood,  
09:17:52 6 yes.

09:17:52 7 Q. And does that mean that  
09:17:56 8 you've never done a study looking at  
09:17:57 9 T/E ratio?

09:17:59 10 A. Correct.

09:17:59 11 Q. In your -- and you've never  
09:18:03 12 done a study looking at T/E ratio in  
09:18:06 13 blood?

09:18:06 14 A. Well, we have done studies  
09:18:09 15 looking at T/E ratios in blood.

09:18:11 16 Q. You've looked at  
09:18:12 17 epitestosterone?

09:18:13 18 A. Yes.

09:18:13 19 Q. But never in urine?

09:18:14 20 A. Not in urine.

09:18:16 21 Q. Have you ever done a study  
09:18:25 22 using IRMS to look for 5-alpha or  
09:18:30 23 5-beta in urine?

09:18:32 24 A. No.

09:18:33 25 Q. Have you ever done a study

1 JOHN AMORY - CROSS

09:18:35 2 looking for any metabolite of  
09:18:38 3 testosterone in urine?

09:18:39 4 A. No.

09:18:40 5 Q. And so when it comes to  
09:18:46 6 urinary metabolism of steroids you rely  
09:18:51 7 on the literature?

09:18:52 8 A. Correct.

09:19:30 9 Q. Can you see that, Dr. Amory,  
09:19:33 10 Page 1575. The Minuscript is 394.  
09:19:39 11 1575 is the transcript.

09:19:45 12 A. Is there any way to make it  
09:19:47 13 a little bit bigger?

09:19:53 14 Q. It's 1575?

09:20:02 15 THE PRESIDENT: Can you read  
09:20:03 16 it now, doctor?

09:20:06 17 THE WITNESS: That's fine.

09:20:07 18 THE PRESIDENT: Just take  
09:20:08 19 your time and tell us when you're  
09:20:11 20 ready.

09:20:13 21 Q. So Mr. Jacobs is asking you  
09:20:15 22 a question about whether you'd expect  
09:20:21 23 any relationship between the four  
09:20:25 24 metabolites of testosterone in urine;  
09:20:29 25 is that right?

1 JOHN AMORY - CROSS

09:20:29 2 A. Correct.

09:20:30 3 Q. And your answer is that  
09:20:33 4 you'd expect them to correspond fairly  
09:20:36 5 tightly to one another?

09:20:39 6 A. Yes.

09:20:40 7 Q. And then he asks you "Are  
09:20:56 8 there peer-reviewed scientific papers  
09:20:58 9 that you're aware of that support  
09:21:01 10 that?" And you say yes.

09:21:03 11 A. Yes.

09:21:03 12 Q. And then you say that the  
09:21:05 13 best is from Shackelton.

09:21:12 14 A. Yes.

09:21:20 15 Q. What I'm interested in is --  
09:21:52 16 let me give you this so that it makes  
09:21:54 17 it easier for you. You say the best is  
09:22:06 18 Shackelton, and then on Pages 1576 and  
09:22:16 19 1577 and 1578 and 1579, going onto  
09:22:28 20 1580, you go on and explain your  
09:22:31 21 interpretation of the Shackelton study.

09:22:34 22 A. Correct.

09:22:35 23 Q. And then the other study  
09:22:42 24 that you rely on is discussed at the  
09:22:47 25 bottom of 1580, line 15 -- well, excuse

1 JOHN AMORY - CROSS

09:22:57 2 me, line 21 where Mr. Jacobs starts  
09:23:01 3 asking you about the Cologne study?

09:23:05 4 A. Yes.

09:23:07 5 Q. And then you go on on Page  
09:23:09 6 1581 and 1582 and 1583 and 1584 and  
09:23:20 7 1585 describing your interpretation of  
09:23:25 8 the Cologne study?

09:23:27 9 A. That's correct.

09:23:28 10 Q. And I'd like you to go back  
09:23:31 11 and look at 1583 in particular where in  
09:23:39 12 the middle of that page you're talking  
09:23:41 13 about person number 9 in the Cologne  
09:23:45 14 study and how that was an interesting  
09:23:46 15 subject, correct?

09:23:47 16 A. Correct.

09:23:47 17 Q. Now, do you understand that  
09:24:06 18 the authors of these two studies that  
09:24:10 19 you relied on in answering Mr. Jacobs'  
09:24:14 20 question disagree with you on your  
09:24:20 21 opinion that 5-alpha and 5-beta should  
09:24:23 22 go in tandem?

09:24:26 23 A. Yes, I read their  
09:24:27 24 declarations to that effect.

09:24:29 25 Q. In your earlier testimony

1 JOHN AMORY - CROSS

09:24:48 2 you talked about whether individuals  
09:24:50 3 were high mode or low mode?

09:24:54 4 A. Yes.

09:24:54 5 Q. And did I understand it  
09:24:56 6 correctly that someone is high mode if  
09:25:02 7 their normal T/E ratio is close to one?

09:25:05 8 A. Correct.

09:25:06 9 Q. Could you go to Page 1589 of  
09:25:45 10 the transcript, please. Have you found  
09:25:57 11 that?

09:25:57 12 A. Yes.

09:25:58 13 Q. There's a question down at  
09:26:03 14 18 that says "If you're a high-mode" --  
09:26:08 15 this is Mr. Jacobs' question, "If  
09:26:10 16 you're a high-mode individual and you  
09:26:13 17 take testosterone, then your T/E ratio  
09:26:16 18 is always going to go" and your answer  
09:26:20 19 is "It should always go into the  
09:26:22 20 abnormal range." And the question is  
09:26:26 21 "Abnormal, like, higher than four," and  
09:26:29 22 your answer is "Certainly, yes."

09:26:31 23 A. That's what we see in the  
09:26:32 24 studies.

09:26:34 25 Q. And you gave that answer



1 JOHN AMORY - CROSS

09:26:35 2 because that's how you interpreted the  
09:26:36 3 studies?

09:26:37 4 A. Yes.

09:26:38 5 Q. These aren't your studies,  
09:26:40 6 these are the studies by Schaenzer and  
09:26:43 7 Shackelton?

09:26:43 8 A. Yes, and any others from  
09:26:46 9 Baume and Aguilera.

09:26:48 10 Q. Baume and Aguilera?

09:26:51 11 A. Yes.

09:26:52 12 Q. And those are the studies  
09:26:53 13 upon which you base your opinion?

09:26:55 14 A. Yes.

09:27:11 15 Q. So let's take a look at the  
09:27:15 16 Schaenzer study, it's Exhibit 34, and  
09:27:20 17 what I want to do is I -- so what you  
09:28:05 18 said was that in a high-mode person the  
09:28:09 19 T/E ratio should always go under the  
09:28:17 20 abnormal range above four. So this is  
09:28:22 21 the appendix to the study. Can you  
09:28:27 22 look at person P2, please.

09:28:29 23 A. Sure.

09:28:30 24 Q. So on the left-hand axis is  
09:28:36 25 the T/E ratio?

1 JOHN AMORY - CROSS

09:28:38 2 A. Correct.

09:28:39 3 Q. And on the bottom is the  
09:28:41 4 number of days, correct?

09:28:43 5 A. That's right.

09:28:44 6 Q. So what you see on this  
09:28:47 7 person is that they have a normal T/E  
09:28:52 8 ratio of about one?

09:28:55 9 A. Yes.

09:28:55 10 Q. Which makes them a high-mode  
09:28:57 11 person?

09:28:57 12 A. Yes.

09:28:58 13 Q. And then in this study  
09:28:59 14 they're getting testosterone every day?

09:29:02 15 A. Correct.

09:29:03 16 Q. And all of a sudden when  
09:29:10 17 they start getting testosterone it  
09:29:12 18 spikes up and after a few days it goes  
09:29:16 19 to 7, correct?

09:29:18 20 A. Correct.

09:29:18 21 Q. And then while they're still  
09:29:22 22 getting testosterone, it drops back to  
09:29:25 23 2 and 1?

09:29:26 24 A. Correct.

09:29:26 25 Q. And then for a long time,

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09:29:31 2 even though they're still getting  
09:29:33 3 testosterone, it stays at 2 and then it  
09:29:37 4 goes back up in the 2 to 4 range and up  
09:29:42 5 to 7?

09:29:43 6 A. Correct.

09:29:44 7 Q. And then they stop the  
09:29:45 8 testosterone and it goes back to 1  
09:29:49 9 again.

09:29:50 10 A. Correct.

09:29:50 11 Q. So would with this  
09:29:54 12 individual, even though they're on  
09:29:57 13 testosterone every day, depending on  
09:29:58 14 what day they're tested it could be a 7  
09:30:04 15 or it could be a 1, their T/E ratio?

09:30:07 16 A. That's correct. May I sort  
09:30:08 17 of digress here a bit. This study of  
09:30:11 18 the gel is quite different in terms of  
09:30:13 19 the reported T/E ratios than all of the  
09:30:16 20 other studies. So the Aguilera study  
09:30:19 21 which used injectable testosterone, the  
09:30:22 22 Baume study which used oral  
09:30:24 23 testosterone. All of those previous  
09:30:26 24 studies have reported T/E ratios that  
09:30:28 25 are above 4. This study is different

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09:30:31 2 because it uses a gel. And the gel is  
09:30:33 3 very different in terms of the amount  
09:30:34 4 of testosterone that it delivers.  
09:30:35 5 Obviously with an injection of  
09:30:37 6 testosterone you're delivering the same  
09:30:39 7 dose to everybody. I will tell you  
09:30:41 8 clinically that the gel results in very  
09:30:45 9 -- it's very variable absorption. As  
09:30:48 10 you know from reading the study, that  
09:30:50 11 of the nine subjects who are in this  
09:30:53 12 group of the continuous administration,  
09:30:55 13 four had elevations in their level,  
09:30:57 14 four or five, three had mild elevations  
09:30:59 15 such as this subject, and two subjects  
09:31:01 16 had no elevations in their serum  
09:31:03 17 testosterone levels, implying that  
09:31:05 18 those individuals were not absorbing  
09:31:07 19 anywhere near as much testosterone as  
09:31:09 20 the other individuals.

09:31:10 21 So what you're seeing here,  
09:31:11 22 in contrast to both the injectable and  
09:31:13 23 the oral form of testosterone, is that  
09:31:15 24 the dose of testosterone that's being  
09:31:17 25 absorbed is lower and is variable. And

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09:31:20 2 that accounts for the lower levels of  
09:31:23 3 -- lower absolute levels of the T/E  
09:31:26 4 ratios and also the variability that's  
09:31:27 5 seen in this study. So it's important  
09:31:29 6 to distinguish the gel from either the  
09:31:33 7 intramuscular or the oral testosterone,  
09:31:35 8 which is what I was responding to in  
09:31:36 9 the question.

09:31:36 10 Q. And so that I understand, if  
09:31:40 11 I'm using a T/E gel on some days I may  
09:31:48 12 absorb more and on other days I may  
09:31:51 13 absorb less?

09:31:52 14 A. You know, that's correct.  
09:31:54 15 It's also, it's difficult for the  
09:31:58 16 subjects to administer. So we often  
09:32:00 17 have subjects who really don't achieve  
09:32:02 18 therapeutic levels of testosterone with  
09:32:04 19 the gel, so I have to switch them back  
09:32:06 20 to the injection and that has to do  
09:32:08 21 with it's very hard to give, first of  
09:32:10 22 all, because it comes in little sachets  
09:32:12 23 and they have to squeeze it out, they  
09:32:15 24 lose some of it on their hands, they're  
09:32:17 25 putting it on their skin, people vary

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09:32:19 2 in terms of how much they're going to  
09:32:21 3 absorb through their skin, based on  
09:32:23 4 body size, how much fat they have. And  
09:32:26 5 so there are a lot of variables that  
09:32:28 6 affect this. This is why in terms of  
09:32:30 7 the gel, in contrast to other forms of  
09:32:32 8 testosterone you do see this variable.

09:32:34 9 Q. And so when you look at  
09:32:36 10 individual number 5 and you see his T/E  
09:32:40 11 ratio varying all over the place while  
09:32:44 12 he's on the gel it may be that some  
09:32:47 13 days he's absorbing more and other days  
09:32:50 14 he's absorbing less?

09:32:51 15 A. Yes, and the other point to  
09:32:53 16 make about this type of variability is  
09:32:55 17 the range of the variability, I mean  
09:32:56 18 because of the way the Y axis is  
09:32:58 19 graphed in this diagram it makes it  
09:33:00 20 look like the scatter plots are  
09:33:02 21 actually quite wide. You'll notice  
09:33:04 22 with both subject P2 and subject P5  
09:33:07 23 we're talking about a range that's  
09:33:09 24 between 1 and 7 at most. We're not  
09:33:13 25 seeing truly, truly elevated values.

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09:33:15 2 So this is again another --  
09:33:17 3 another point that makes -- that  
09:33:20 4 they're probably not absorbing a lot of  
09:33:22 5 the testosterone. Both those  
09:33:23 6 individuals you mentioned were kind of  
09:33:25 7 in that -- if you look on figure 1 and  
09:33:27 8 2 of that study, were in the group of  
09:33:29 9 subjects who never achieved  
09:33:32 10 superphysiologic testosterone during  
09:33:34 11 their six weeks of continuous T-Gel  
09:33:37 12 administration. I'm referring to  
09:33:39 13 figure 2. So you can see that these  
09:33:41 14 guys are in that second tier of  
09:33:43 15 absorbers, if you will.

09:33:45 16 Q. So take a look at --

09:33:50 17 THE PRESIDENT: Just before  
09:33:52 18 we go, can you give us the reference to  
09:33:53 19 this exhibit that's been on the screen,  
09:33:56 20 please.

09:33:56 21 MR. YOUNG: It's 34.

09:33:58 22 THE PRESIDENT: Thank you.

09:33:59 23 Q. Let's go to individual P13.

09:34:15 24 You said that there was a tight range.

09:34:18 25 On this individual you have a range

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09:34:23 2 within two days where he goes from a  
09:34:29 3 T/E ratio of 11 down to a T/E ratio of  
09:34:32 4 2, right? Am I understanding that  
09:34:36 5 correctly?

09:34:36 6 A. Right. This is one of the  
09:34:37 7 subjects who was getting testosterone  
09:34:40 8 intermittently. So you can see pretty  
09:34:42 9 clearly on the graph here when he's on  
09:34:44 10 and when he's off testosterone.

09:34:46 11 Q. So he goes off testosterone  
09:34:47 12 and --

09:34:48 13 A. He goes right back down  
09:34:50 14 nicely to 1.

09:34:51 15 Q. And his T/E plummets?

09:34:53 16 A. Yes, during the period when  
09:34:55 17 he's on the gel he's got one between it  
09:34:56 18 looks like a 2 and a maximum of 10.

09:34:59 19 Q. On the next individual, 14,  
09:35:11 20 this is another intermittent individual  
09:35:14 21 and he's got a T/E ratio greater than  
09:35:17 22 20 and he goes off the gel and it  
09:35:22 23 plummets down to 1 or 2 again within a  
09:35:24 24 couple of days?

09:35:25 25 A. Yes. And that fits because



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09:35:26 2 he was one of the people who with  
09:35:28 3 intermittent application did achieve  
09:35:30 4 the superphysiologic testosterone  
09:35:32 5 levels of 3. So he has a very wide  
09:35:36 6 range because he's going from no  
09:35:38 7 testosterone to good absorption and a  
09:35:40 8 high T/E ratio and then back down. So  
09:35:44 9 he's a high absorber.

09:35:48 10 Q. So let's talk for a minute  
09:36:12 11 about the relationship between T/E  
09:36:15 12 ratios and IRMS results. And again,  
09:36:24 13 just so we're clear, any understanding  
09:36:28 14 that you have about the relationship  
09:36:31 15 about T/E ratio in urine and IRMS  
09:36:34 16 results in urine is based on your  
09:36:36 17 reading of these studies?

09:36:37 18 A. Correct.

09:36:49 19 Q. Let's go to Exhibit 43 and  
09:37:08 20 figure 1. Have we got Exhibit 43? And  
09:37:20 21 I'm interested in Page 367. It's the  
09:37:49 22 Baume study that Dr. Amory referred to.  
09:38:31 23 Would you go back four pages in that  
09:38:37 24 study to the tables.

09:38:38 25 Let's look at individual S1.

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09:38:43 2 A. Okay.

09:38:45 3 Q. And on this study what you  
09:39:34 4 have is on the left axis you have the  
09:39:45 5 T/E ratio; is that right?

09:39:48 6 A. Yes.

09:39:49 7 Q. And on the Y axis on the  
09:39:53 8 bottom you have the number of hours  
09:39:58 9 post-oral administration?

09:40:00 10 A. Correct.

09:40:01 11 Q. And the general point of  
09:40:07 12 this study is that oral administration  
09:40:13 13 of testosterone clears very quickly?

09:40:18 14 A. Yes, this dose, 80  
09:40:20 15 milligrams, it's gone by 24 hours.

09:40:23 16 Q. And in a lot of people it's  
09:40:24 17 gone in 8 hours?

09:40:25 18 A. Yes.

09:40:25 19 Q. Another point of this study  
09:40:32 20 is that when you give oral testosterone  
09:40:36 21 it favors the production of 5-beta over  
09:40:40 22 5-alpha, isn't that the conclusion of  
09:40:42 23 the author?

09:40:43 24 A. Yes, but I'm not sure the  
09:40:45 25 data bears out that conclusion.

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09:40:50 2 Q. But that's the author's  
09:40:51 3 conclusion yes.

09:40:53 4 A. It's worth going through the  
09:40:54 5 data here.

09:40:55 6 Q. I'm asking you what the  
09:40:57 7 author's conclusion is?

09:41:01 8 THE PRESIDENT: And if you  
09:41:01 9 want to then comment on your assessment  
09:41:04 10 of that, by all means do so.

09:41:05 11 A. I'm not sure that's a valid  
09:41:07 12 conclusion looking at the data here.

09:41:10 13 So I mean as you can see the  
09:41:11 14 metabolites in the bottom three boxes  
09:41:13 15 there essentially the formation of  
09:41:17 16 metabolites -- is there a laser  
09:41:19 17 pointer? I can just walk you through  
09:41:21 18 it. So we'll pass over subject S1  
09:41:26 19 without further comment because he's a  
09:41:27 20 low-mode individual so you can't --  
09:41:30 21 well, that's a good point actually,  
09:41:31 22 that in the low mode. Does everyone  
09:41:34 23 see he's a low-mode individual?

09:41:36 24 THE PRESIDENT: If you pause  
09:41:37 25 one minute, we're going to give you

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09:41:38 2 what you requested, the laser.

09:41:47 3 A. So as Mr. Young was pointing  
09:41:49 4 out, one of the comments that was made  
09:41:51 5 earlier was that in a high-mode  
09:41:54 6 individual the T/E ratio and the  
09:41:55 7 metabolites would correspond well. This  
09:41:57 8 is an example of a low mode individual.  
09:41:59 9 You can see that his baseline T/E there  
09:42:01 10 is 0.1. So he's one of these individuals  
09:42:05 11 who for reasons that are unknown secrete  
09:42:08 12 a lot less urinary testosterone, so their  
09:42:12 13 ratio of T to E is quite low.

09:42:15 14 What's interesting about these  
09:42:17 15 individuals is when you administer  
09:42:18 16 testosterone times zero their IRMS  
09:42:21 17 metabolites behave as anyone else's  
09:42:23 18 would, and so the two boxes here, the  
09:42:27 19 5-alpha and 5-beta you can see that they  
09:42:30 20 go down. At a four hour time point you  
09:42:32 21 can see that they're produced in almost  
09:42:34 22 similar amounts and that the delta/delta  
09:42:37 23 values of their metabolites increase and  
09:42:39 24 return to baseline in a very similar time  
09:42:42 25 course.

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09:42:42 2 So this is reassuring, it's  
09:42:44 3 telling us that we can use metabolite  
09:42:46 4 assessment to detect testosterone  
09:42:49 5 administration even in a low mode  
09:42:51 6 individual where you don't see an  
09:42:53 7 elevation in the T/E ratio.

09:42:53 8 So then going to the second  
09:42:56 9 subject here, this is an example of a  
09:42:58 10 high-mode individual. You can see that  
09:42:59 11 his baseline, as we discussed earlier,  
09:43:01 12 is approximately 1 for his T/E to E  
09:43:04 13 ratio and here there's a very good  
09:43:06 14 concordance between the elevation and  
09:43:08 15 the T/E ratio and the increase in the  
09:43:12 16 delta/delta of the two metabolites.  
09:43:13 17 And you can see here the 5-alpha and  
09:43:15 18 the 5-beta delta/deltas behave in a  
09:43:18 19 very similar fashion and this is where  
09:43:20 20 I differ with that conclusion of the  
09:43:22 21 preferential formation of the 5-beta is  
09:43:25 22 because the 5-alpha and the 5-beta seem  
09:43:28 23 to be behaving in a very similar  
09:43:29 24 fashion.

09:43:29 25 We can go through the rest

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09:43:31 2 of the subjects, but --

09:43:32 3 MR. RIVKIN: Sorry, could  
09:43:33 4 you just help us. Which is the 5-alpha  
09:43:36 5 and which is the 5-beta?

09:43:40 6 Q. Actually, Dr. Amory, you're  
09:43:41 7 talking about testosterone and  
09:43:46 8 etiocholanolone?

09:43:46 9 A. You're quite right. This is  
09:43:47 10 androsterone and etiocholanolone. The  
09:43:50 11 androsterone is the 5-alpha and that's  
09:43:53 12 in the circles, and etiocholanolone is  
09:43:57 13 the 5-beta metabolite which is in the  
09:44:00 14 squares. And so I mean you're hard  
09:44:03 15 pressed to say here that the squares  
09:44:06 16 are that different from the circles, in  
09:44:08 17 other words, the 5-beta metabolite, the  
09:44:12 18 etiocholanolone does not seem in my  
09:44:13 19 mind preferentially produced compared  
09:44:15 20 to the 5-alpha metabolite which is the  
09:44:17 21 androsterone.

09:44:19 22 MR. RIVKIN: The triangle is  
09:44:23 23 the androstanol which is the ERC.

09:44:26 24 THE WITNESS: The triangle  
09:44:27 25 is the androstanol which is the

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09:44:29 2 endogenous reference compound and  
09:44:30 3 that's the line at the top of each of  
09:44:33 4 the graphs. And I will add that, you  
09:44:35 5 know, I've done a lot of -- we're  
09:44:37 6 trying to -- one of the things that  
09:44:38 7 we're doing in terms of our research in  
09:44:40 8 the University of Washington is trying  
09:44:42 9 to develop an oral form of testosterone  
09:44:44 10 that we could use -- get approved in  
09:44:46 11 the United States. This form of  
09:44:48 12 testosterone that was used in this  
09:44:49 13 study, testosterone undecanoate is not  
09:44:51 14 currently approved in the United  
09:44:55 15 States, and the reason it's not  
09:44:57 16 approved in the United States in large  
09:44:58 17 part is because when you administer  
09:45:02 18 oral testosterone undecanoate you get a  
09:45:05 19 lot of 5-alpha reduced product, or DHD,  
09:45:08 20 the hydrotestosterone. So in fact  
09:45:10 21 there's a lot of 5-alpha reductase that  
09:45:13 22 appears in both the gut and the liver.

09:45:15 23 And so you might actually  
09:45:16 24 think a priori that you would expect to  
09:45:18 25 see in excess of the 5-alpha metabolite

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09:45:20 2 after oral administration and not the  
09:45:22 3 5-beta. What the data shows is they  
09:45:25 4 seem to be produced in similar -- at  
09:45:27 5 least the delta/deltas of the compound  
09:45:30 6 seem to be moving at similar fashion.

09:45:31 7 Q. So when we're looking at  
09:45:32 8 these three individuals, the variation  
09:45:38 9 in how they respond to this oral  
09:45:42 10 testosterone is pretty marked. The  
09:45:45 11 first guy has no change in T/E, but a  
09:45:49 12 significant change in his andro and  
09:45:52 13 etio?

09:45:53 14 A. Correct.

09:45:55 15 Q. Excuse me --

09:45:56 16 A. Yes, andro and etio.

09:45:58 17 Q. The second guy has a big  
09:46:00 18 change in T/E and a big change in andro  
09:46:03 19 and etio. And the third guy has hardly  
09:46:07 20 any change in either?

09:46:08 21 A. Correct. And again, what  
09:46:11 22 you would think that that was due to  
09:46:12 23 is, again, from our bases on the  
09:46:15 24 experiments we're administered oral  
09:46:17 25 testosterone orally is you do see again



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09:46:19 2 as you do with the gel, big differences  
09:46:20 3 in terms of absorption. So you'd have  
09:46:24 4 to look at serum testosterone  
09:46:27 5 measurements here to actually know  
09:46:30 6 actually what was going on with  
09:46:32 7 absorption.

09:46:32 8 But in a high-mode  
09:46:34 9 individual such as these two, for  
09:46:35 10 example, I would conjecture that this  
09:46:36 11 one probably absorbed a much bigger  
09:46:39 12 dose than subject S2 probably absorbed  
09:46:42 13 a lot more than subject S3, very  
09:46:45 14 analogous to the situation with the  
09:46:48 15 gels. There are differences in  
09:46:49 16 absorption.

09:46:49 17 Q. For oral testosterone as  
09:46:51 18 well?

09:46:51 19 A. Yes.

09:46:51 20 Q. And on different days?

09:46:52 21 A. Oh, yes, yes. And in  
09:46:54 22 particular, testosterone undecanoate is  
09:46:58 23 variably absorbed depending on the fat  
09:47:02 24 composition of the meal. This is  
09:47:03 25 another reason why it wasn't approved

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09:47:05 2 by the FDA for use in this country is  
09:47:07 3 the effective dose can go from zero to  
09:47:09 4 a hundred percent depending on how much  
09:47:12 5 fat the individual has co-ingested with  
09:47:14 6 the dose of testosterone undecanoate.

09:47:17 7 Q. So if I were with this  
09:47:23 8 detection window, if I were an athlete  
09:47:25 9 who wanted to dope with testosterone,  
09:47:28 10 oral testosterone would -- it would be  
09:47:34 11 very difficult to detect if, say, I  
09:47:38 12 took it at night before I went to bed  
09:47:42 13 and I was tested the next afternoon?

09:47:44 14 A. Yes. Yes. So if you took  
09:47:48 15 this dose of 80 milligrams. Obviously  
09:47:50 16 if you take a higher dose you're going  
09:47:52 17 to get more delivery and then  
09:47:54 18 potentially you could get -- have a  
09:47:56 19 positive result 24 hours later.

09:47:58 20 Q. And if I was being clever  
09:48:03 21 and I was trying to measure my T/E  
09:48:08 22 ratio so that I could take the biggest  
09:48:11 23 dose that I could and not significantly  
09:48:16 24 affect my T/E ratio, I mean that's --  
09:48:21 25 that would be a clever way to do that,

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09:48:23 2 trying to understand the dose, right?

09:48:26 3 A. Yes. You'd have to do a lot  
09:48:28 4 of experiments on yourself to --

09:48:30 5 Q. And the problem would be is  
09:48:35 6 that I think I got it right but then  
09:48:37 7 depending on the meal or the gut, I may  
09:48:44 8 have a sudden absorption that's a lot  
09:48:46 9 different than what I was expecting and  
09:48:48 10 so my T/E ratio spikes?

09:48:50 11 A. Yes, it's possible.

09:48:52 12 Q. There's obviously a  
09:49:17 13 disagreement between you and Dr.  
09:49:22 14 Shackelton, Dr. Clark over whether a  
09:49:28 15 gel applied through the skin favors the  
09:49:33 16 production of 5-alpha over 5-beta,  
09:49:37 17 you've read that?

09:49:37 18 A. Yes.

09:49:51 19 Q. And it's your view the only  
09:49:52 20 time that would happen is if the gel  
09:49:54 21 was applied on the scalp or the  
09:49:57 22 scrotum?

09:49:57 23 A. So the data from the gel  
09:49:58 24 studies when the gel that's being used  
09:50:01 25 currently, the andro gel and the

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09:50:04 2 Testim, don't show a significant  
09:50:06 3 elevation in the DHT compared to the T.

09:50:10 4 Q. You're talking about true  
09:50:12 5 blood levels, not urine?

09:50:13 6 A. Not urine. Blood obviously  
09:50:15 7 proceeds urine. The only way it gets  
09:50:17 8 to the urine is via the blood. The  
09:50:19 9 blood is the most sensitive marker of  
09:50:22 10 how much 5-alpha reduction is going on  
09:50:24 11 in the skin. Your point about the  
09:50:26 12 scalp and the scrotum is a good one.

09:50:28 13 So the history of  
09:50:29 14 transdermal testosterone is such that  
09:50:30 15 the first transdermal preparation was  
09:50:34 16 the scrotal patch and that did result  
09:50:36 17 in significant elevations of DHT to T  
09:50:39 18 and that's because there's a high  
09:50:40 19 concentration of 5 reductase in the  
09:50:43 20 scrotum and it's high in the scalp as  
09:50:45 21 well. It's high in the areas where  
09:50:47 22 there's 5-alpha reductase like the  
09:50:49 23 facial skin and so forth.

09:50:51 24 The fact of the matter is  
09:50:52 25 now the gel we use, we tell guys to put

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09:50:54 2 it on their chest and their back and in  
09:50:56 3 the Wang study that I think was  
09:50:59 4 referenced, the clinical pharmacokinetic  
09:51:01 5 studies we don't see the elevation of  
09:51:03 6 DHT to T that was seen for example with  
09:51:07 7 the scrotal patch. Which is a good  
09:51:10 8 thing. Because we actually don't want  
09:51:12 9 that elevation. There was a lot of  
09:51:13 10 concern that that elevation in DHT  
09:51:16 11 would predispose individuals to  
09:51:18 12 prostate cancer.

09:51:20 13 Q. Have you been on the  
09:51:23 14 internet ever looking for the websites  
09:51:29 15 that tell people how to dope?

09:51:33 16 A. No.

09:51:33 17 Q. Have you ever heard of  
09:51:38 18 people using a testosterone patch on  
09:51:42 19 their scrotum, is that what you were  
09:51:44 20 talking about as something -- well,  
09:51:49 21 have you ever heard of people using it?

09:51:50 22 A. Well, we used to prescribe  
09:51:52 23 it before we had patches that could be  
09:51:54 24 used on nonscrotal skin. It was very  
09:51:58 25 difficult for people to use.

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09:52:04 2 Q. Let's take a look at Exhibit  
09:52:08 3 152, the Schaenzer study. And it is --  
09:52:22 4 last page, second to last page, so 141.  
09:53:40 5 Focus on the lower box.

09:53:42 6 A. Your version of that  
09:53:43 7 Schaenzer report is a little different  
09:53:45 8 than mine.

09:53:47 9 Q. This is a "Recent advances  
09:53:53 10 in doping analysis" that was published.  
09:53:56 11 There are two Schaenzer studies. Have  
09:53:59 12 you ever seen this document?

09:54:00 13 A. I don't think that I have.  
09:54:01 14 March 2007?

09:54:02 15 Q. It's our Exhibit 152.

09:54:04 16 A. I've seen this data in  
09:54:07 17 Dr. Clark's declaration. Anyway, go  
09:54:10 18 ahead.

09:54:11 19 MR. SUH: Could you provide  
09:54:15 20 him with a copy and give him an  
09:54:16 21 opportunity to review it.

09:54:17 22 THE WITNESS: That would be  
09:54:18 23 nice.

09:54:19 24 MR. YOUNG: Sure.

09:55:00 25 A. Okay.

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09:55:01 2 Q. Have you seen that document  
09:55:02 3 before?

09:55:02 4 A. I've seen this table in  
09:55:04 5 Dr. Clark's declaration.

09:55:05 6 Q. Let's take a look at the  
09:55:09 7 whole study. It starts at --

09:55:13 8 A. It looks like the same data  
09:55:14 9 that's in the Schaenzer study that I'm  
09:55:16 10 familiar with.

09:55:18 11 Q. Right. But have you seen  
09:55:20 12 that study before?

09:55:22 13 A. This version of the report,  
09:55:23 14 no.

09:55:24 15 Q. So you weren't given that by  
09:55:26 16 counsel to review?

09:55:27 17 A. I don't -- I don't believe  
09:55:28 18 so.

09:55:39 19 Q. Take a second familiarizing  
09:55:41 20 yourself with it before I ask you  
09:55:43 21 questions.

09:55:46 22 A. So this is just data -- a  
09:55:48 23 different report of data from the same  
09:55:50 24 study?

09:55:51 25 Q. Yes.

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09:55:51 2 A. Yes, fine. You can go  
09:55:59 3 ahead.

09:56:01 4 Q. Take a look at table 6. And  
09:56:06 5 this is the subject 9 you referred to  
09:56:09 6 when you were being asked questions by  
09:56:11 7 Mr. Jacobs in the AAA hearing, right?

09:56:14 8 A. Yes.

09:56:15 9 Q. And the shaded areas are the  
09:56:22 10 weeks when the subject was on  
09:56:24 11 testosterone gel?

09:56:25 12 A. That's correct.

09:56:26 13 Q. And the nonshaded areas are  
09:56:28 14 the weeks when he isn't?

09:56:30 15 A. Correct.

09:56:31 16 Q. And we'll start off at the  
09:56:38 17 point up at the top left. This guy has  
09:56:50 18 a T/E ratio of 3.36 even before he's  
09:56:59 19 taken any testosterone gel?

09:57:00 20 A. Yes, at that point, yes.

09:57:03 21 Q. And he has a relatively high  
09:57:05 22 testosterone, T/E ratio level all the  
09:57:12 23 time when he's normal, it's about 2.5?

09:57:16 24 A. 2.5, right.

09:57:18 25 Q. And when you look at the



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09:57:26 2 5-alpha diol and the 5-beta diol when  
09:57:30 3 compared to the endogenous reference  
09:57:32 4 compound, the 5-alpha diol is, the  
09:57:39 5 delta/delta's when he's not taking  
09:57:42 6 testosterone is about 1.75 difference?

09:57:46 7 A. Yes, that's right.

09:57:54 8 Q. A couple of questions on  
09:57:55 9 this.

09:57:56 10 MR. RIVKIN: I want to make  
09:57:58 11 sure I understand where that number  
09:57:59 12 comes from, the alpha diol.

09:58:01 13 MR. YOUNG: When you're  
09:58:02 14 looking at the natural delta/delta  
09:58:04 15 between 5-alpha --

09:58:06 16 THE WITNESS: He's averaging  
09:58:07 17 the numbers in this column that are not  
09:58:08 18 shaded. Is that fair?

09:58:09 19 MR. YOUNG: That's right.

09:58:10 20 MR. RIVKIN: Okay. Thank  
09:58:16 21 you.

09:58:29 22 Q. First let me direct your  
09:58:31 23 attention to on the first week that  
09:58:32 24 this guy's on testosterone gel the  
09:58:39 25 difference between the 5-alpha diol and

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09:58:47 2 the 5-beta diol is 3.3?

09:58:52 3 A. Correct.

09:58:52 4 Q. So that's a lot higher than  
09:58:56 5 the 1 and the most 2 that you testified  
09:59:00 6 about earlier, right?

09:59:01 7 A. In the injection studies,  
09:59:04 8 yes.

09:59:04 9 Q. So it's different when  
09:59:05 10 you're talking about gels?

09:59:06 11 A. Well, this subject perhaps  
09:59:12 12 means that it is different when we're  
09:59:14 13 talking about gels. The problem is  
09:59:16 14 that we've got essentially this subject  
09:59:18 15 and data from one or two other  
09:59:20 16 individuals in this study. There's  
09:59:22 17 another point I wanted to make about  
09:59:24 18 this study. You'll notice that the  
09:59:27 19 endogenous reference compound that's  
09:59:29 20 being used here is different than the  
09:59:30 21 endogenous reference compound that's  
09:59:32 22 used, for example, in the Shackelton  
09:59:36 23 paper and in the Aguilera papers that  
09:59:38 24 were used to create the reference  
09:59:40 25 values for this.

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09:59:41 2 So it's frustrating to all  
09:59:46 3 of a sudden have the ground shift and  
09:59:47 4 instead of using 5-beta pregnanediol as  
09:59:51 5 our endogenous reference compound we're  
09:59:54 6 using 11 hydroxy androsterone as the  
09:59:58 7 reference compound.

09:59:59 8 Q. If what you're doing is  
10:00:00 9 asking the question does testosterone  
10:00:03 10 gel favor the 5-alpha or the 5-beta,  
10:00:08 11 and you're just comparing 5-alpha and  
10:00:11 12 5-beta, as long as you have the same  
10:00:15 13 endogenous reference compound that  
10:00:16 14 you're subtracting on both sides --

10:00:19 15 A. Sure, but it's more  
10:00:20 16 frustrating because it's harder to know  
10:00:23 17 what's truly a positive value. I mean  
10:00:24 18 if our reference values are based upon  
10:00:27 19 subtraction with 5-beta pregnanediol  
10:00:29 20 and all of a sudden we're using a  
10:00:31 21 different endogenous reference compound  
10:00:33 22 how do we know which of these values  
10:00:35 23 represents a true positive. That's my  
10:00:37 24 point. It's just different.

10:00:39 25 Q. But what this shows is that

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10:00:42 2 5-alpha is favored over 5-beta  
10:00:47 3 production by 3.3 delta units?

10:00:50 4 A. Yes, in this individual  
10:00:51 5 there's a big discrepancy there we  
10:00:53 6 haven't seen with other forms of  
10:00:55 7 testosterone in the other studies.

10:01:05 8 Q. What's interesting, and see  
10:01:07 9 if I've got this right, is when his  
10:01:17 10 5-alpha moves the most and actually his  
10:01:21 11 5-beta moves the most, his T/E ratio  
10:01:26 12 goes up but not nearly as much as when  
10:01:33 13 his 5-alpha and 5-beta are lower. Have  
10:01:38 14 I got that right?

10:01:39 15 A. Well, you know, I'm not sure  
10:01:41 16 how much emphasis I would put on the  
10:01:43 17 difference between T/E ratio of 4.2 and  
10:01:46 18 5.6. I would just consider those to be  
10:01:48 19 really reasonably similar. So, you  
10:01:51 20 know, you could say that, but again,  
10:01:57 21 what the statistical relevance of this  
10:01:59 22 in a single individual to me is not  
10:02:02 23 clear. So I would like to see a much  
10:02:04 24 larger group of individuals before I'd  
10:02:06 25 make any conclusions about favoring the

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10:02:08 2 5-alpha versus the 5-beta and how well  
10:02:10 3 the T/E ratio corresponded to changes  
10:02:12 4 in the magnitude of the 5-alpha  
10:02:15 5 delta/delta.

10:02:17 6 Q. So that I understand your  
10:02:18 7 point, what you're saying is that a  
10:02:21 8 change in T/E ratio of one and a  
10:02:28 9 half --

10:02:29 10 A. It's -- yes, it's something,  
10:02:31 11 but again, it's -- from a statistical  
10:02:33 12 perspective --

10:02:34 13 Q. You wouldn't put any --

10:02:35 14 A. Well, I'd like to see either  
10:02:37 15 bigger changes and I'd certainly like  
10:02:39 16 to see them in more individuals. I  
10:02:40 17 mean big changes in the T/E I think are  
10:02:43 18 relevant, so.

10:02:44 19 Q. Okay. Now, I understand  
10:03:06 20 from your declaration you make  
10:03:12 21 reference to an endurance study and  
10:03:14 22 it's by Baume.

10:03:21 23 A. Yes.

10:03:21 24 Q. Where they take normal  
10:03:23 25 athletes and they find that after

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10:03:27 2 administration of testosterone their  
10:03:31 3 endurance doesn't change?

10:03:32 4 A. Correct. There's two groups  
10:03:34 5 in that. I can pull that study for  
10:03:37 6 you. Two different forms of  
10:03:38 7 testosterone had no affect on indices  
10:03:40 8 of endurance, yes. So, for example,  
10:03:44 9 their anaerobic threshold didn't  
10:03:46 10 improve, their lactic production after  
10:03:48 11 exercise didn't change, and so forth.

10:03:50 12 Q. You've never seen a study on  
10:03:53 13 endurance for athletes or anyone else  
10:03:58 14 who's in a testosterone depleted state,  
10:04:02 15 have you?

10:04:02 16 A. No.

10:04:03 17 Q. And wouldn't you agree that  
10:04:09 18 when a cyclist is competing in a long  
10:04:13 19 road race like the Tour de France, that  
10:04:17 20 there's a good chance that their  
10:04:19 21 testosterone level is going to be  
10:04:22 22 depleted during the course of that  
10:04:23 23 race?

10:04:23 24 A. You know, that's  
10:04:25 25 interesting. So that was hypothesized

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10:04:27 2 in one of the declarations. I'd be  
10:04:28 3 interested in seeing that data. We do  
10:04:30 4 know that severe stress can certainly  
10:04:33 5 cause testosterone levels to fall. In  
10:04:34 6 fact, we've done research in the  
10:04:36 7 University of Washington showing, for  
10:04:38 8 example, that the stress of surgery can  
10:04:40 9 dramatically reduce testosterone  
10:04:42 10 levels. Whether or not cycling in a  
10:04:44 11 tour would do the same thing I'm not  
10:04:46 12 sure. It might, it might. It's an  
10:04:48 13 interesting conjecture.

10:04:49 14 Q. You wouldn't be surprised if  
10:04:50 15 it happened?

10:04:51 16 A. I'd be interested, yes. I  
10:04:53 17 wouldn't be -- I wouldn't be surprised.  
10:04:55 18 It certainly seems hard to me, the  
10:05:01 19 riding in the Tour de France.

10:05:06 20 MR. RIVKIN: That's  
10:05:06 21 something on which everyone in the room  
10:05:08 22 can agree.

10:05:09 23 A. So, you know, I think that  
10:05:10 24 has the potential to suppress the  
10:05:10 25 hypothalamic-pituitary-gonadal axis --

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10:05:18 2 anyway, to lower testosterone levels.

10:05:21 3 Richard knows what I'm talking about.

10:05:23 4 Q. Let's go back to the patch  
10:05:25 5 on the scrotum.

10:05:26 6 Is it true that when you  
10:05:52 7 measure someone's testosterone, and  
10:05:55 8 again in blood, which is your  
10:05:57 9 experience, that it's going to be at  
10:06:01 10 its lowest level at about 5 o'clock in  
10:06:04 11 the afternoon?

10:06:06 12 A. Yes. So as you know,  
10:06:10 13 there's a bit of a Circadian rhythm in  
10:06:15 14 the serum testosterone levels in the  
10:06:18 15 serum so it seems to be highest in the  
10:06:21 16 morning and then it tends to fall in  
10:06:22 17 the evening. And this rhythmicity  
10:06:25 18 seems to be attenuated somewhat when  
10:06:27 19 people age. But your statement is  
10:06:27 20 correct. It tends to be lower. It  
10:06:29 21 still remains within the normal range  
10:06:31 22 during that whole period of time.

10:06:33 23 Q. I believe you testified  
10:06:34 24 before that you thought that the  
10:06:39 25 absolute urine testosterone levels of



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10:06:42 2 Mr. Landis were pretty low during the  
10:06:47 3 tour?

10:06:47 4 A. Yes. They were in the  
10:06:50 5 normal range, but they weren't above  
10:06:53 6 the mean, for example. So they were  
10:06:55 7 below the median if you follow me.

10:06:57 8 Q. So with those low levels it  
10:07:02 9 wouldn't have -- if he wanted to mask  
10:07:04 10 the use of testosterone with epi --  
10:07:10 11 take another step back. If you're  
10:07:12 12 taking testosterone it's going to  
10:07:13 13 suppress your natural epitestosterone,  
10:07:16 14 right?

10:07:16 15 A. Yes.

10:07:16 16 Q. And so at those low levels  
10:07:19 17 if he wanted to mask the use of  
10:07:21 18 testosterone it wouldn't have taken  
10:07:23 19 much epi to do it?

10:07:29 20 A. It would be really tricky.  
10:07:31 21 I mean you'd have to take  
10:07:32 22 epitestosterone and then you'd expect  
10:07:34 23 your urinary epitestosterone to go up.  
10:07:37 24 So I'm not sure that that could be what  
10:07:40 25 happened, explains these results

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10:07:41 2 because his urine epitestosterone  
10:07:43 3 levels were low.

10:07:45 4 Q. But so were his  
10:07:47 5 testosterone?

10:07:47 6 A. Yes.

10:07:48 7 Q. And so were his T/E ratio?

10:07:50 8 A. The epitestosterone was  
10:07:51 9 really low, quite low. In fact, it was  
10:07:53 10 close to the lower limit of the normal  
10:07:55 11 range or below it with those numbers.  
10:08:00 12 So those numbers don't look consistent  
10:08:01 13 to me with somebody who's taking  
10:08:03 14 epitestosterone.

10:08:04 15 Q. Well let's talk about that.  
10:08:06 16 So if you're taking testosterone you  
10:08:17 17 would expect your epitestosterone to be  
10:08:25 18 very, very low because it's suppressed?

10:08:27 19 A. It doesn't fall by as much  
10:08:28 20 as you're sort of implying. In our  
10:08:30 21 studies of serum epitestosterone we've  
10:08:33 22 found that -- we were actually trying  
10:08:34 23 to use it as a marker for endogenous  
10:08:37 24 testosterone production and we were  
10:08:38 25 disappointed because the serum

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10:08:40 2 epitestosterone only fell by 30 to 40  
10:08:42 3 percent in men we were administering  
10:08:44 4 high doses of testosterone for  
10:08:45 5 contraceptive purposes. So we had  
10:08:47 6 originally thought it would be  
10:08:49 7 suppressed by much more, but in fact  
10:08:51 8 the epitestosterone production is only  
10:08:52 9 partially produced in response to  
10:08:55 10 lutenizing hormone. So some of the  
10:08:57 11 epitestosterone seems to be coming from  
10:09:00 12 adrenal sources and other nontesticular  
10:09:04 13 sources that aren't suppressed by  
10:09:06 14 endogenous testosterone.

10:09:07 15 And actually, in the  
10:09:10 16 Schaenzer study in the tables in the  
10:09:12 17 back, they actually measure the urinary  
10:09:15 18 epitestosterone and it did fall, but  
10:09:18 19 not by more than 50 percent I think, on  
10:09:20 20 average. And some of the individuals  
10:09:22 21 it didn't -- wasn't affected at all and  
10:09:24 22 some of the individuals it fell  
10:09:26 23 dramatically, so there's some  
10:09:28 24 variability there.

10:09:28 25 Q. There's variability but

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10:09:31 2 isn't it the case that in the urine  
10:09:34 3 studies when you take testosterone,  
10:09:38 4 there's actually a bigger effect on  
10:09:40 5 suppressing your epi than there is on  
10:09:43 6 increasing your testosterone?

10:09:44 7 A. You're talking about in the  
10:09:46 8 urine?

10:09:47 9 Q. In the urine?

10:09:47 10 A. I haven't seen statistics on  
10:09:51 11 that. Which are you referring to?

10:09:55 12 Q. There are -- I'd have to dig  
10:09:58 13 them out. They're not in these  
10:10:00 14 particular studies.

10:10:01 15 A. I'd have to look at that.

10:10:03 16 Q. You just don't know one way  
10:10:05 17 or the other?

10:10:05 18 A. I'd have to look at that  
10:10:07 19 data.

10:10:08 20 Q. And so going back, if you're  
10:10:26 21 suppressing the epi and your T is low  
10:10:32 22 already, then it would not take -- it  
10:10:42 23 doesn't take much epi to cause a T/E  
10:10:49 24 ratio to look normal when your T/E is  
10:10:51 25 low already, I guess that's what I'm

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10:10:53 2 asking?

10:10:53 3 A. I'm not aware of studies  
10:10:56 4 where people have tried to pseudo  
10:11:00 5 normalize a T/E ratio with  
10:11:01 6 epitestosterone administration, so I  
10:11:04 7 can't comment. If there's literature  
10:11:05 8 that I'm not aware of out there about  
10:11:07 9 this, I mean okay, but I just haven't  
10:11:10 10 seen studies where people were  
10:11:13 11 administering epitestosterone to try to  
10:11:14 12 make a T/E ratio become normal.

10:11:17 13 Q. Right. You are aware that  
10:11:28 14 athletes have used epitestosterone?

10:11:30 15 A. I am, yes.

10:11:31 16 Q. To try to normalize their  
10:11:34 17 T/E ratio?

10:11:34 18 A. Sure.

10:11:34 19 Q. And they tend not to do  
10:11:36 20 studies of it?

10:11:37 21 A. Indeed not. But you're  
10:11:39 22 asking me how much it would take and  
10:11:41 23 I'm just answering that I can't answer  
10:11:42 24 that question because there hasn't been  
10:11:44 25 a study.

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10:11:45 2 Q. Fair enough.

10:12:34 3 THE PRESIDENT: Which is the  
10:12:36 4 document we're looking at here?

10:12:38 5 MR. YOUNG: We're looking at  
10:12:39 6 Mr. Landis' appeal brief.

10:12:44 7 Q. I'm interested in this  
10:12:48 8 paragraph right here.

10:12:53 9 THE PRESIDENT: The number  
10:12:53 10 of which is?

10:12:57 11 MR. YOUNG: They don't  
10:12:58 12 number their paragraphs.

10:12:59 13 THE PRESIDENT: The page  
10:13:00 14 reference?

10:13:02 15 MR. YOUNG: The page  
10:13:03 16 reference is 58, it's the first full  
10:13:05 17 paragraph on the page.

10:13:06 18 THE PRESIDENT: Thank you.

10:13:07 19 Q. "So the IRMS test results are  
10:13:11 20 also inconsistent with known science  
10:13:13 21 because, as explained by Dr. Amory," and  
10:13:17 22 then there's a transcript cite, "Mr.  
10:13:21 23 Landis' lutenizing hormone values, as  
10:13:24 24 shown before and after July 23rd, stage  
10:13:27 25 20, are inconsistent with the chronic use

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10:13:33 2 of testosterone." So that wasn't what  
10:13:40 3 you said in your transcript, was it?

10:13:45 4 A. That sounds correct to me.  
10:13:46 5 So -- I mean as you know, we've studied  
10:13:49 6 this extensively, and --

10:13:51 7 Q. But let's -- I'll give you a  
10:13:54 8 chance to explain, but let's take a  
10:13:56 9 look at your transcript at 1550. And  
10:14:32 10 what I see is you talking about  
10:14:34 11 lutenizing hormone, but I don't see you  
10:14:37 12 saying anything about Mr. Landis'  
10:14:43 13 lutenizing hormone values before or  
10:14:48 14 after July 23rd?

10:14:51 15 A. Not in this comment, no. I  
10:14:54 16 think we're talking generally here  
10:14:56 17 about the effects of androgens on  
10:14:58 18 lutenizing hormone.

10:15:00 19 Q. Right. And have you seen  
10:15:06 20 data before and after July 23rd on Mr.  
10:15:10 21 Landis' lutenizing hormone?

10:15:12 22 A. I believe I did see some  
10:15:13 23 lutenizing hormone value.

10:15:15 24 Q. You've seen one?

10:15:16 25 A. Yes.

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10:15:16 2 Q. And that's all, right?

10:15:18 3 A. I can remember at least one,  
10:15:19 4 yes.

10:15:20 5 Q. Right. Go back to the quote  
10:15:24 6 again. So the brief says, "Mr. Landis'  
10:15:39 7 lutenizing hormone values as shown  
10:15:41 8 before and after July 23rd are  
10:15:45 9 inconsistent," right? There's only  
10:15:50 10 one?

10:15:50 11 A. During the tour I believe.  
10:15:51 12 But I believe there were values from  
10:15:53 13 before the tour.

10:15:54 14 Q. We've never been shown them.  
10:15:56 15 Have you been shown them?

10:15:58 16 A. I thought I had seen some LH  
10:16:01 17 values that were normal. There was  
10:16:04 18 quite a bit of longitudinal testing  
10:16:06 19 that he had prior to the tour and I  
10:16:09 20 thought it was part of that data. The  
10:16:15 21 point of this of course is the LH value  
10:16:18 22 that was taken during the tour was not  
10:16:21 23 suppressed.

10:16:21 24 Q. It was not suppressed?

10:16:22 25 A. Wasn't it 0.9 or 1.0?



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10:16:25 2 Q. Let's take a look at it.

10:16:28 3 A. Certainly not suppressed the  
10:16:30 4 way that the subjects who we administer  
10:16:32 5 exogenous testosterone again in  
10:16:35 6 contraceptive studies are suppressed.

10:16:37 7 Q. In that case you're totally  
10:16:39 8 trying to suppress?

10:16:40 9 A. That's the objective, yes,  
10:16:41 10 indeed.

10:16:42 11 Q. So take a look at --

10:16:44 12 A. Although the doses of  
10:16:45 13 testosterone that that takes are not  
10:16:46 14 that great. You know, we can suppress  
10:16:49 15 the LH in most men to under 0.5 with a  
10:16:53 16 hundred milligrams of testosterone  
10:16:58 17 enanthate weekly, which is the  
10:17:00 18 intramuscular formulation.

10:17:02 19 Q. Take a look at Exhibit USADA  
10:17:06 20 0034.

10:17:20 21 MR. RIVKIN: Sorry, Mr.  
10:17:21 22 Young, it's page USADA 0034. What  
10:17:25 23 exhibit number is it?

10:17:27 24 MR. YOUNG: Sorry, thank you  
10:17:28 25 very much. It's in Exhibit 24 which is

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10:17:30 2 the A documentation package.

10:17:32 3 MR. RIVKIN: Thank you.

10:17:43 4 Q. So this was the result of a  
10:17:51 5 urine measurement of LH during -- in  
10:17:58 6 the sample from the 17th stage of the  
10:18:02 7 tour on July 20th, you understand that?

10:18:03 8 A. Yes.

10:18:04 9 Q. And the result for LH was  
10:18:12 10 1.09 international units?

10:18:14 11 A. Correct.

10:18:15 12 Q. And the range was 0 to 40.  
10:18:23 13 That's a very low LH, right?

10:18:25 14 A. You often see these ranges  
10:18:29 15 that are listed like that, but those  
10:18:31 16 aren't the ranges that we see in normal  
10:18:33 17 men. These ranges, it depends on what  
10:18:36 18 population you're using to compute  
10:18:38 19 them. But I don't consider this to be  
10:18:41 20 a suppressed LH is the bottom line. We  
10:18:45 21 see LHs that are much, much lower than  
10:18:48 22 this in men that are taking  
10:18:50 23 testosterone.

10:18:50 24 Q. In men who are taking  
10:18:52 25 testosterone?

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10:18:52 2 A. Yes, in men who we're  
10:18:54 3 administering testosterone to for  
10:18:56 4 experimental purposes.

10:18:56 5 Q. When you look at it, you're  
10:18:58 6 looking at it in blood?

10:19:00 7 A. Yes.

10:19:00 8 Q. Have you ever looked at LH  
10:19:03 9 levels in urine?

10:19:04 10 A. No, we never studied LH in  
10:19:06 11 urine. But the LH in urine, the range  
10:19:09 12 is not that different.

10:19:10 13 Q. So are you saying that  
10:19:13 14 someone who has an LH of 1.09 would not  
10:19:20 15 be taking testosterone?

10:19:22 16 A. This is consistent with  
10:19:24 17 somebody -- an LH of somebody who's not  
10:19:26 18 taking testosterone.

10:19:26 19 Q. Or it could also be  
10:19:28 20 consistent with somebody who is taking  
10:19:29 21 testosterone?

10:19:29 22 A. Yes. I mean as you know  
10:19:31 23 from our studies, some of the guys  
10:19:33 24 don't suppress when they're taking  
10:19:34 25 testosterone, but they're in the

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10:19:35 2 minority. We can get about 85 to 90  
10:19:38 3 percent of men to suppress their LH to  
10:19:40 4 less than 0.5 with exogenous  
10:19:43 5 testosterone. The unfortunate fact is  
10:19:45 6 that some of the guys don't suppress  
10:19:47 7 fully and that's why we don't have a  
10:19:49 8 contraceptive for them, because they  
10:19:51 9 can't fully suppress their  
10:19:54 10 gonadotropins.

10:20:10 11 MR. YOUNG: I have no  
10:20:11 12 further questions.

10:20:13 13 THE WITNESS: May I make one  
10:20:14 14 more point on that. Just for the sake  
10:20:17 15 of the committee's understanding, the  
10:20:18 16 normal range in our assay for LH, our  
10:20:20 17 lab's assay is one to 10, so 1.0 to  
10:20:25 18 10.0. So that's why I would consider  
10:20:27 19 this to be actually within the normal  
10:20:29 20 range and not suppressed. LH assay  
10:20:32 21 ranges vary, the Schaenzer study has a  
10:20:35 22 lower limit, it's higher than the limit  
10:20:39 23 we use, but in general I wouldn't  
10:20:41 24 consider that to be suppressed.

10:20:42 25 MR. RIVKIN: But still the

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10:20:43 2 point in the brief was this couldn't be  
10:20:45 3 a proper test result because the LH  
10:20:49 4 level was not suppressed and what I'm  
10:20:54 5 hearing from you is it may or may not  
10:20:56 6 be, there's no way to draw a  
10:20:58 7 conclusion?

10:20:59 8 THE WITNESS: I guess what I  
10:20:59 9 should say more accurately is that the  
10:21:02 10 LH of 1.09 is not consistent with the  
10:21:05 11 chronic use of testosterone in the  
10:21:06 12 large majority of men. So in the large  
10:21:10 13 majority of men, 85 to 90 percent of  
10:21:12 14 men, when we administer them  
10:21:14 15 testosterone over a long period of time  
10:21:16 16 we can suppress their LH successfully.

10:21:19 17 MR. RIVKIN: Over a long  
10:21:20 18 period of time?

10:21:21 19 THE WITNESS: Three weeks.

10:21:22 20 MR. RIVKIN: If one used it  
10:21:24 21 shorter --

10:21:24 22 THE WITNESS: That's  
10:21:25 23 correct, the pharmacodynamics of LH  
10:21:28 24 suppression is not immediate. In fact,  
10:21:30 25 we usually in these studies look at the

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10:21:33 2 LH suppression after three or four  
10:21:35 3 weeks. If you take a single dose of  
10:21:38 4 testosterone the LH suppression effect  
10:21:40 5 is not going to be considerable.

10:21:43 6 MR. RIVKIN: Thank you.

10:21:48 7 THE PRESIDENT: Mr. Suh, do  
10:21:49 8 you have any reexamination?

10:21:50 9 REDIRECT EXAMINATION

10:21:53 10 BY MR. SUH:

10:21:53 11 Q. Dr. Amory, first of all, let  
10:21:54 12 me begin with an opening question and  
10:21:56 13 I'd ask you to comment generally and  
10:21:58 14 then we'll turn to some of the studies.

10:22:00 15 Did any of the questions or  
10:22:04 16 figures you've shown in some of these  
10:22:06 17 studies change your fundamental opinion  
10:22:08 18 that the test results in this case are  
10:22:12 19 inconsistent with the administration of  
10:22:15 20 testosterone either by gel or patch or  
10:22:21 21 injection?

10:22:21 22 A. I mean we have the most data  
10:22:23 23 here obviously on injections, that's  
10:22:26 24 the best, and then we've got the second  
10:22:28 25 most data on oral. What we have is

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10:22:30 2 only a small amount of data on gels.  
10:22:32 3 So I'd still stand by the idea that,  
10:22:34 4 you know, we like to see from the  
10:22:35 5 studies, we'd like to see the T/E ratio  
10:22:38 6 go up in a high-mode individual and  
10:22:40 7 we'd like to see the metabolites both  
10:22:42 8 go down and be significantly suppressed  
10:22:46 9 during testosterone administration.

10:22:47 10 Q. I'd like to --

10:22:51 11 MR. SUH: Todd, if you could  
10:22:52 12 put side by side -- actually, why don't  
10:22:54 13 we start with GDC 1363.1.

10:23:05 14 Q. Dr. Amory, do you recognize  
10:23:07 15 what --

10:23:08 16 MR. RIVKIN: Sorry, Mr. Suh,  
10:23:09 17 let me ask you the same thing. In  
10:23:11 18 which exhibit does this document exist?

10:23:14 19 MR. WEISS: The GDC exhibits  
10:23:16 20 are actually by Bates number. So the  
10:23:18 21 binders are listed GDC.

10:23:21 22 MR. RIVKIN: Thank you.

10:23:26 23 Q. Have you seen GDC 1363.1  
10:23:29 24 before?

10:23:29 25 A. Yes.

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10:23:29 2 Q. And can you explain to the  
10:23:34 3 panel what each of the columns are and  
10:23:37 4 what in particular the bolded numbers  
10:23:40 5 are?

10:23:40 6 A. Sure. So these are the  
10:23:42 7 samples from Mr. Landis. This is the  
10:23:46 8 date, the sample number, the urinary  
10:23:49 9 testosterone, the epitestosterone, the  
10:23:51 10 testosterone, the epitestosterone  
10:23:53 11 ratio. This is the -- these are the  
10:23:56 12 metabolites, the androsterone, the  
10:23:59 13 etiocholanolone, the five 5-alpha diol  
10:24:02 14 and the 5-beta diol and these are the  
10:24:04 15 endogenous reference compounds to which  
10:24:06 16 they're being compared, the 5  
10:24:08 17 pregnanediol is the most relevant here.  
10:24:10 18 The -- and then these are the  
10:24:13 19 delta/delta values, so these are the  
10:24:15 20 delta values of the metabolites,  
10:24:18 21 subtracted from the endogenous  
10:24:20 22 reference compound. And the ones that  
10:24:22 23 you've bolded there are the ones that  
10:24:24 24 meet the criteria for positivity from  
10:24:26 25 the Aguilera study. So that is they



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10:24:29 2 are more than three standard deviations  
10:24:32 3 above the money of the 73 individuals  
10:24:33 4 that were studied in Aguilera's 2001  
10:24:37 5 paper.

10:24:38 6 So to just go over them, you  
10:24:40 7 know, this is -- this is a positive  
10:24:43 8 one, this is a positive one, these two  
10:24:45 9 are positive, this is positive, this is  
10:24:47 10 negative, positive, negative, positive  
10:24:50 11 negative. And then, you know, the T to  
10:24:56 12 Es which are greater than four are  
10:24:58 13 going to be positive. So this one  
10:25:00 14 here, but none of the others.

10:25:02 15 Q. Let me compare -- let me  
10:25:06 16 first ask you this question. When you  
10:25:07 17 were describing the administration of  
10:25:10 18 testosterone and its comparison to the  
10:25:13 19 lutenizing hormone value, LH value, you  
10:25:16 20 were describing what a long period of  
10:25:18 21 time was and I believe you selected a  
10:25:19 22 period of about three weeks. Why did  
10:25:21 23 you select that period?

10:25:22 24 A. Well, we've good data  
10:25:24 25 actually from studying guys every week

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10:25:28 2 during the administration of  
10:25:29 3 testosterone, and we've seen that the  
10:25:31 4 LH sort of will suppress maximally at  
10:25:35 5 about three to four weeks.

10:25:36 6 Q. So comparing this chart of  
10:25:40 7 summary values as against your previous  
10:25:42 8 comment about lutenizing hormone, would  
10:25:46 9 you describe this as a single use of --  
10:25:49 10 or supposed alleged single use of  
10:25:52 11 testosterone?

10:25:53 12 A. Well, I'm not sure bringing  
10:25:56 13 lutenizing hormone into the  
10:25:58 14 conversation here is really relevant  
10:26:00 15 because lutenizing hormone is a  
10:26:02 16 response to the hormone situation in  
10:26:03 17 the body, it takes awhile to occur,  
10:26:06 18 which is considered a pharmacodynamic  
10:26:08 19 effect, so that's an effect in response  
10:26:10 20 to the hormone. This is really  
10:26:13 21 metabolism of -- this has to do with  
10:26:15 22 metabolism of testosterone. So they're  
10:26:17 23 looking at T/E ratios and they're  
10:26:19 24 looking at metabolites. So I would  
10:26:21 25 separate the two in my mind.

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10:26:25 2 MR. SUH: Todd, could you  
10:26:27 3 put up next to this slide the six  
10:26:30 4 figures from the Shackelton study, the  
10:26:34 5 1997 Shackelton study. The six figures  
10:26:37 6 are in figure 4, the graphical  
10:26:42 7 representation.

10:26:47 8 Q. Dr. Amory, can you explain,  
10:26:53 9 can you compare the data --

10:26:55 10 MR. RIVKIN: Sorry, again,  
10:26:56 11 just for the record, the Shackelton  
10:26:58 12 study is where in the exhibits?

10:27:02 13 MR. SUH: Exhibit 40.

10:27:03 14 MR. RIVKIN: Thank you.

10:27:13 15 Q. You were asked just now on  
10:27:16 16 cross examination about the Shackelton  
10:27:19 17 study. Is figure 4 taken from the  
10:27:21 18 Shackelton study?

10:27:22 19 A. Yes, it is.

10:27:23 20 Q. Can you explain to the panel  
10:27:26 21 basically what the data in figure 4  
10:27:31 22 shows and how you would compare that as  
10:27:34 23 against the data that's present in this  
10:27:36 24 case.

10:27:36 25 A. This is a very important

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10:27:38 2 study. So this is a study in which  
10:27:40 3 five Chinese athletes were administered  
10:27:43 4 a single 250 milligram dose of  
10:27:45 5 intramuscular testosterone in the form  
10:27:47 6 of testosterone enanthate. And so what  
10:27:50 7 you're looking at here on this axis is  
10:27:53 8 time in days, and what you're looking  
10:27:56 9 at in the Y axis is the metabolite  
10:27:58 10 values and so the delta/delta that  
10:28:00 11 we're often talking about is the  
10:28:01 12 difference between the metabolite and  
10:28:03 13 the endogenous reference compound.

10:28:05 14 And so what Dr. Shackelton  
10:28:08 15 has done here is very nice. This is a  
10:28:10 16 time course of how the delta/delta  
10:28:13 17 value and the metabolite values will  
10:28:15 18 change over time, and what you're  
10:28:17 19 looking at here is the five  
10:28:19 20 individuals. Don't be fooled, these  
10:28:20 21 two graphs are pertaining to the same  
10:28:23 22 subjects, subject 2. So what we have  
10:28:25 23 here is subject 1, subject 2, subject  
10:28:28 24 3, subject 4 and subject 5. In this  
10:28:30 25 graph you're only looking at one of the

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10:28:32 2 two metabolites. So the closed  
10:28:34 3 rectangles are the 5-beta androstane  
10:28:37 4 diol and the closed triangles are the  
10:28:41 5 5-alpha androstane diol. I'm going to  
10:28:43 6 focus primarily on these four graphs.

10:28:47 7 Starting with subject 2A  
10:28:48 8 what you see is a little T with the  
10:28:50 9 arrows when the subject was injected  
10:28:52 10 with testosterone. So the numbers to  
10:28:54 11 the left here represent the subject's  
10:28:56 12 baseline values. And then immediately  
10:28:59 13 after the injection of the testosterone  
10:29:01 14 what you see here is a dramatic  
10:29:03 15 increase in the delta/delta value.  
10:29:06 16 It's hard to really make out the  
10:29:08 17 numbers on the graph there. But  
10:29:13 18 looking at my copy you can see that the  
10:29:15 19 delta/delta values go from  
10:29:17 20 approximately 1 to 2 to 4 -- thank you.  
10:29:22 21 To approximately 4 here, maybe more  
10:29:25 22 like 3.5 or 4, and that they do so in a  
10:29:29 23 fashion that's fairly similar to one  
10:29:31 24 another, and that they stay suppressed  
10:29:34 25 throughout several concurrent

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10:29:37 2 measurements. Here it looks like day  
10:29:39 3 3, day 5, day 7, day 9. Excuse me,  
10:29:44 4 it's hard to know which day those are.  
10:29:46 5 This is day 8 here, they say  
10:29:50 6 suppressed. Again, the magnitude of  
10:29:51 7 the suppression is almost identical  
10:29:53 8 between the two. And then here at  
10:29:54 9 about day 9 you start to see the  
10:29:57 10 delta/delta values fall and then by day  
10:30:00 11 16 they're essentially back to where  
10:30:02 12 they were at baseline, perhaps even  
10:30:04 13 earlier, more like day 14.

10:30:06 14 So what you're seeing here  
10:30:07 15 is a nice example of how the two  
10:30:09 16 metabolites, the 5-alpha and the 5-beta  
10:30:12 17 diol get suppressed in a very similar  
10:30:15 18 fashion after the administration of  
10:30:17 19 exogenous testosterone in this case,  
10:30:20 20 testosterone enanthate delivered  
10:30:22 21 intramuscularly. And furthermore, I  
10:30:24 22 point out that this effect here where  
10:30:26 23 you're seeing the delta/delta values  
10:30:29 24 fall back to normal is very consistent  
10:30:31 25 with the pharmacokinetics of

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10:30:33 2 testosterone enanthate which we know  
10:30:35 3 lasts approximately two weeks or 14  
10:30:37 4 days. What you're seeing here is this  
10:30:39 5 is the period especially early on where  
10:30:41 6 the serum testosterone would be  
10:30:44 7 highest, i.e. the dose that is  
10:30:46 8 administered is quite high. Then, as  
10:30:48 9 the testosterone administration falls  
10:30:50 10 after the injection, you see the  
10:30:52 11 delta/delta values fall back to normal  
10:30:54 12 and about by day 14 all of the  
10:30:56 13 exogenous testosterone would be gone at  
10:30:58 14 that point and the two delta/delta  
10:31:00 15 values would go back to normal. You  
10:31:03 16 will you see it's a pattern very  
10:31:05 17 similar, reflecting the fact that the  
10:31:07 18 testosterone is proceeding  
10:31:09 19 approximately -- the delta/delta values  
10:31:20 20 of the metabolites are changing in a  
10:31:23 21 very similar fashion.

10:31:26 22 MR. PAULSSON: So this is a  
10:31:28 23 graphic vision of carbon depletion?

10:31:31 24 THE WITNESS: Exactly. It's  
10:31:33 25 a nice study because you've got

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10:31:34 2 multiple measurements over time and  
10:31:37 3 multiple subjects. We can go on to the  
10:31:39 4 other subjects.

10:31:39 5 Q. If you could.

10:31:40 6 A. So that was subject 2. Go  
10:31:42 7 to subject 3. Identical graph, the  
10:31:50 8 identical axes, you can see that  
10:31:52 9 there's a little wiggle in the  
10:31:54 10 endogenous reference compound, but the  
10:31:56 11 same principle applies here. The  
10:31:58 12 5-alpha and the 5-beta diol are similar  
10:32:01 13 baseline. After the administration of  
10:32:03 14 the exogenous testosterone the  
10:32:06 15 delta/delta values increase in a very  
10:32:08 16 similar fashion. They stay suppressed  
10:32:10 17 in a very similar fashion. Much was  
10:32:12 18 made about the fact that these  
10:32:14 19 metabolites, these two lines cross.

10:32:16 20 I'm not sure that I could comment  
10:32:21 21 further on that. You can see that  
10:32:22 22 again about day 14 you're back to  
10:32:24 23 baseline and that the rise in the rate  
10:32:26 24 of these delta/deltas is very similar.

10:32:28 25 MR. RIVKIN: Sorry, remind



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10:32:30 2 me, how was the testosterone  
10:32:31 3 administered?

10:32:32 4 THE WITNESS: This is 250  
10:32:33 5 milligrams of testosterone enanthate  
10:32:35 6 administered by intramuscular  
10:32:37 7 injections, single dose. You see that  
10:32:40 8 T up there in the upper left-hand  
10:32:42 9 corner. That's when it was given.

10:32:45 10 MR. RIVKIN: Thank you.

10:32:46 11 A. That's why whoever we're  
10:32:47 12 looking at here is basically as the  
10:32:49 13 testosterone washes out the metabolites  
10:32:51 14 are changing.

10:32:52 15 And then just briefly, you  
10:32:55 16 don't need to magnify them, I think  
10:32:57 17 once you get the hang of this diagram  
10:32:59 18 you can kind of see that subject 4 and  
10:33:01 19 5 are very similar as well, baseline  
10:33:04 20 values here, you can see the two  
10:33:06 21 metabolites, the delta/delta values are  
10:33:09 22 going down at around the same time and  
10:33:11 23 then as the testosterone washes out  
10:33:13 24 you're seeing those values return to  
10:33:16 25 baseline.

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10:33:16 2 Now there's a little more  
10:33:18 3 spread here in this four and five in  
10:33:19 4 terms of the two compounds as you get  
10:33:21 5 further out as the testosterone washes  
10:33:22 6 out. But again, I'd say that the  
10:33:26 7 pattern, if you will, of the  
10:33:27 8 metabolites changing over time is  
10:33:30 9 reasonably similar between the five  
10:33:31 10 subjects.

10:33:33 11 Q. And again, could you comment  
10:33:36 12 as to the total picture of what you see  
10:33:41 13 on GDC 1363 as opposed to what you see  
10:33:45 14 in the Shackelton study?

10:33:48 15 A. Thank you. So -- I mean one  
10:33:50 16 of the points of this is that, you  
10:33:53 17 know, these metabolite delta/deltas are  
10:33:56 18 in this study with the injection of  
10:33:58 19 testosterone enanthate are reasonably  
10:34:01 20 similar to one another. If you were to  
10:34:03 21 calculate those values they should be  
10:34:05 22 pretty close and they should change --  
10:34:06 23 they're changing at about a similar  
10:34:08 24 time course to one another. So what  
10:34:11 25 you're not seeing here is really large

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10:34:14 2 discrepancies at most of the time  
10:34:18 3 points between the 5-alpha diol and the  
10:34:21 4 5-beta diol delta/delta, with the  
10:34:23 5 exception perhaps of a point here where  
10:34:25 6 there's a difference of around 2 or  
10:34:27 7 2.5. But most of these time points  
10:34:30 8 measured here, here, here, here, here,  
10:34:32 9 here, you're seeing the values are  
10:34:34 10 fairly similar to one another.

10:34:35 11 So this is I think a well  
10:34:37 12 done and a very important study giving  
10:34:39 13 us an idea about how we would expect  
10:34:41 14 these metabolites to change over time.  
10:34:43 15 They seem to change, you know, in  
10:34:45 16 tandem, pretty much in tandem to one  
10:34:47 17 another in a very similar time course.

10:34:49 18 I think the other really  
10:34:51 19 important point about this study is  
10:34:52 20 this is occurring pretty much with good  
10:34:55 21 -- a good concordance with actually the  
10:34:57 22 positivity of their T/E ratios. So I  
10:35:00 23 don't know if you want to put it up or  
10:35:02 24 just refer to it. Table 2 in this  
10:35:04 25 study is the same five athletes and it

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10:35:08 2 follows day by day by day what happens  
10:35:10 3 to their T/E ratios. I think we can go  
10:35:12 4 over that.

10:35:18 5 Q. While we're finding that  
10:35:20 6 study, could you also comment as to  
10:35:22 7 what you see in the Shackelton study in  
10:35:24 8 terms of the time progression of the  
10:35:26 9 values as against the time, the  
10:35:30 10 apparent time progression in the  
10:35:32 11 allegedly adverse findings on 1363.

10:35:36 12 A. You mean Mr. Landis'?

10:35:39 13 Q. Mr. Landis, right.

10:35:40 14 A. Well, perhaps you could  
10:35:44 15 magnify those a little bit more while  
10:35:46 16 we're looking for the other one. So,  
10:35:48 17 you know, in the study with the  
10:35:52 18 testosterone enanthate done by Dr.  
10:35:55 19 Shackelton, you saw that again, the two  
10:35:56 20 metabolites were positive at the same  
10:35:58 21 time. So -- and that's in contrast  
10:36:01 22 actually to what we see at several time  
10:36:03 23 points with Mr. Landis' sample.  
10:36:06 24 Certainly this date, the 13th of July  
10:36:09 25 and 18th of July I consider those

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10:36:11 2 values actually to be in pretty good  
10:36:13 3 concordance with one another. Those  
10:36:15 4 are similar to what we would see in the  
10:36:17 5 Shackelton study. They're occurring at  
10:36:19 6 a time when the T/E is not abnormal.  
10:36:23 7 And that we'll get back to in just a  
10:36:25 8 second.

10:36:25 9 What's surprising to me  
10:36:27 10 about the figure that we just discussed  
10:36:28 11 in terms of the metabolites would be  
10:36:29 12 these values here. These values are  
10:36:32 13 very different than the ones we just  
10:36:33 14 looked at in the Shackelton study. So,  
10:36:35 15 for example, we saw that in the  
10:36:37 16 Shackelton -- in the figure we just  
10:36:38 17 looked at that the metabolites were  
10:36:40 18 around 4 and that they stayed pretty  
10:36:42 19 close to one another, except, with the  
10:36:44 20 exception of that period at the very  
10:36:46 21 tail end of the injection interval.

10:36:48 22 Here, we're seeing a  
10:36:50 23 difference of 4, and here we're seeing  
10:36:52 24 differences that are really unusual  
10:36:54 25 compared to the data that we looked at

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10:36:57 2 in that figure. You can see these  
10:37:00 3 values in particular, the 5-beta diol  
10:37:03 4 minus the 5 pregnanediol, these values  
10:37:06 5 are actually pretty close to normal at  
10:37:10 6 the same time that we're seeing a  
10:37:12 7 markedly positive metabolite here in  
10:37:14 8 the 5-alpha diol.

10:37:16 9 So these four numbers at the  
10:37:18 10 bottom right hand of the table, this  
10:37:21 11 marked discrepancy between the alpha  
10:37:23 12 and the beta diol where one would  
10:37:25 13 clearly be considered positive and the  
10:37:26 14 other is normal, are surprising to me  
10:37:29 15 and are very different from those that  
10:37:31 16 we saw in the figure we just looked at.

10:37:33 17 Do you have that?

10:37:36 18 Q. We have it.

10:37:38 19 A. That table.

10:37:39 20 MR. RIVKIN: Before you pull  
10:37:40 21 up the table, let me ask you a  
10:37:42 22 question. What I'm hearing from your  
10:37:43 23 testimony is based on the Shackelton  
10:37:46 24 study which is intramuscular  
10:37:48 25 testosterone, those results would not

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10:37:50 2 be consistent with the use of  
10:37:53 3 intramuscular testosterone?

10:37:55 4 THE WITNESS: That's exactly  
10:37:56 5 right. For several reasons. First the  
10:37:58 6 metabolite --

10:37:59 7 MR. RIVKIN: Let me finish.  
10:38:00 8 If that is so, does that rule out in  
10:38:05 9 any way the use of testosterone in some  
10:38:07 10 other way through gel or patch or  
10:38:11 11 something else?

10:38:11 12 THE WITNESS: No, no.

10:38:12 13 MR. RIVKIN: The Shackelton  
10:38:13 14 study is irrelevant to the use of  
10:38:17 15 testosterone gel or patch or some other  
10:38:20 16 form of using it; is that right?

10:38:22 17 THE WITNESS: Well that's  
10:38:23 18 the crux of this case. So to answer  
10:38:25 19 your first question, testosterone --  
10:38:28 20 it's difficult to extrapolate from one  
10:38:30 21 formulation of testosterone to another  
10:38:32 22 because the absorption and the  
10:38:34 23 pharmacokinetics are so different. So  
10:38:36 24 I wouldn't go that far.

10:38:37 25 MR. RIVKIN: That much we've

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10:38:38 2 learned.

10:38:38 3 THE WITNESS: I wouldn't go  
10:38:39 4 that far. So there's -- in addition to  
10:38:41 5 the metabolite differences here, also  
10:38:44 6 in particular this sequence is quite  
10:38:46 7 useful, the 13th, the 14th and the  
10:38:48 8 18th. You know, where the testosterone  
10:38:50 9 enanthate, the data from Dr.  
10:38:55 10 Shackelton, you'd never expect to see  
10:38:56 11 the metabolites going from positive to  
10:38:58 12 negative on two consecutive days. That  
10:39:00 13 would be very inconsistent with the  
10:39:02 14 figure we just looked at.

10:39:03 15 MR. RIVKIN: If one was  
10:39:05 16 using intramuscular testosterone?

10:39:07 17 THE WITNESS: Exactly.

10:39:08 18 MR. RIVKIN: Not necessarily  
10:39:09 19 if one was using oral testosterone or  
10:39:11 20 testosterone gel?

10:39:11 21 THE WITNESS: No, I think as  
10:39:13 22 we've seen, oral testosterone in  
10:39:14 23 particular very quickly metabolizes.

10:39:16 24 MR. RIVKIN: So those  
10:39:17 25 results could be consistent with that?



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10:39:19 2 THE WITNESS: I wouldn't  
10:39:20 3 rule that out, that's right.

10:39:23 4 MR. RIVKIN: I just wanted  
10:39:24 5 to understand the frame work of your  
10:39:26 6 testimony. Thank you very much.

10:39:27 7 THE WITNESS: That's very  
10:39:28 8 important.

10:39:29 9 MR. PAULSSON: So when you  
10:39:30 10 said this is at the heart of -- when  
10:39:33 11 you say that this is at the heart of  
10:39:35 12 the case, taking that as granted, if  
10:39:41 13 you never -- you nevertheless end up  
10:39:45 14 inconclusive because you don't know.

10:39:47 15 THE WITNESS: That's why I  
10:39:48 16 think -- in my mind we start out kind  
10:39:51 17 of with this data from the Shackelton  
10:39:52 18 study and then we progress to the oral  
10:39:55 19 testosterone and then we have to use  
10:39:56 20 the information that we've garnered  
10:39:58 21 from those studies to try and assess  
10:40:00 22 what's going on in the situation with  
10:40:01 23 the gel in the Schaenzer study. And we  
10:40:04 24 have a lot more data here than we do in  
10:40:07 25 the Schaenzer study. I think this is a

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10:40:10 2 useful paradigm, if you will, for  
10:40:12 3 trying to understand the way these  
10:40:13 4 changes are occurring.

10:40:14 5 MR. PAULSSON: So what would  
10:40:15 6 you say is conclusive with respect to  
10:40:17 7 this as you described the crucial  
10:40:19 8 aspect of this case?

10:40:22 9 THE WITNESS: Well, in my  
10:40:23 10 mind, from the Shackelton study and  
10:40:24 11 from these other studies and from the  
10:40:26 12 work that I was doing for USADA sort of  
10:40:28 13 when we were given instructions  
10:40:31 14 basically on how to call a positive a  
10:40:32 15 positive. And I think based on these  
10:40:35 16 studies and on that information, we  
10:40:36 17 were told, instructed that individuals  
10:40:38 18 should have two, both metabolites be  
10:40:42 19 positive and they should be positive,  
10:40:44 20 you know, they were done on people who  
10:40:46 21 had had positive T/E ratios, so those  
10:40:49 22 criteria, positive T/E ratio and  
10:40:52 23 positive metabolites I think are good  
10:40:54 24 ones. And so based on the studies that  
10:40:57 25 we're showing, and I'm not showing the

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10:41:00 2 T/E ratios now, one would expect an  
10:41:03 3 individual to have a positive T/E ratio  
10:41:04 4 and positive metabolites in a setting  
10:41:06 5 of exogenous testosterone  
10:41:08 6 administration.

10:41:11 7 MR. RIVKIN: I guess I'm  
10:41:12 8 confused by that because earlier you  
10:41:13 9 were looking at studies which showed  
10:41:16 10 clearly negative T/E ratios when people  
10:41:20 11 were using endogenous testosterone.

10:41:22 12 THE WITNESS: Right. So  
10:41:23 13 there's two situations where that can  
10:41:25 14 occur. The first situation is if an  
10:41:27 15 individual is a low-mode individual,  
10:41:28 16 okay. So such an individual who has a  
10:41:30 17 baseline T/E ratio 0.1 is not going to  
10:41:34 18 manifest an increase in their T/E ratio  
10:41:37 19 with exogenous testosterone. We saw  
10:41:38 20 that in the Baume study and we've seen  
10:41:41 21 that in other studies as well, Dr.  
10:41:43 22 Catlin has done studies with that as  
10:41:46 23 well. That's setting number 1.  
10:41:47 24 Setting number 2 is the gel study that  
10:41:49 25 Mr. Young and I covered. Some of those

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10:41:53 2 individuals their T/E ratios weren't  
10:41:55 3 positive. And so -- and that's a very  
10:41:58 4 -- I think the gel is actually the most  
10:42:00 5 confusing situation. And  
10:42:02 6 unfortunately, it's the one on which we  
10:42:04 7 have the least data. So -- and we have  
10:42:09 8 -- I mean -- anyway. Let's talk about  
10:42:12 9 these T/E ratios.

10:42:13 10 Q. Before we go there, you also  
10:42:16 11 mentioned that in response to a  
10:42:20 12 question that USADA had informed you  
10:42:21 13 that for their positivity criteria in  
10:42:24 14 order to declare a positive you need to  
10:42:26 15 find two diols that were --

10:42:28 16 A. That's right.

10:42:28 17 Q. So that would be the two  
10:42:30 18 diols would be 5-alpha and 5-beta?

10:42:32 19 A. That's right.

10:42:32 20 Q. So both of them would have  
10:42:34 21 to be above, or below minus 3.0, plus  
10:42:41 22 the measurement of error?

10:42:43 23 A. Yes. And -- you know,  
10:42:44 24 again, as Dr. -- Mr. Young mentioned  
10:42:47 25 when I started doing this, as a

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10:42:49 2 clinical scientist I didn't have a lot  
10:42:51 3 of experience looking at these doping  
10:42:53 4 measurements and so they -- the USADA  
10:42:55 5 sent me some information about this and  
10:42:57 6 one of them was from Dr. Caitlin's lab  
10:43:00 7 and he said, you know, that the two --  
10:43:04 8 the two metabolites should be more than  
10:43:06 9 3 standard deviations from the normal  
10:43:09 10 range. And they use these criteria  
10:43:12 11 because all -- they wanted to be sure  
10:43:13 12 that they had a true positive. And  
10:43:15 13 they said all must be met for the  
10:43:17 14 sample to be declared positive.

10:43:19 15 And I think based on my  
10:43:20 16 reading of the literature that that's  
10:43:22 17 in agreement with what we see.

10:43:24 18 MR. RIVKIN: You seem to be  
10:43:27 19 reading from a document while you were  
10:43:29 20 describing Dr. Catlin. For the record,  
10:43:32 21 I assume that's a document in the  
10:43:33 22 record and what's the reference just so  
10:43:35 23 we have it?

10:43:38 24 MR. WEISS: If you give me  
10:43:39 25 one moment I will give you the

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10:43:40 2 reference.

10:43:41 3 MR. RIVKIN: Is there a GDC  
10:43:43 4 number at the bottom?

10:43:45 5 THE WITNESS: No, sorry.

10:43:48 6 MR. RIVKIN: Mr. Weiss, if  
10:43:49 7 you could give it to us at some point.

10:43:52 8 MR. WEISS: Exhibit 42.

10:43:53 9 MR. RIVKIN: Thank you.

10:43:56 10 A. The point is, not just that  
10:43:59 11 they told me to do this, the point is  
10:44:00 12 that I think having both metabolites  
10:44:02 13 positive as in this memo is a good  
10:44:05 14 criteria. I mean I think it's borne  
10:44:07 15 out by reference to the literature, so.  
10:44:13 16 Does that answer your question?

10:44:14 17 MR. RIVKIN: Yes.

10:44:14 18 A. You want to talk about this.  
10:44:17 19 Can you enlarge that.

10:44:18 20 Q. Turn to the table. Just so  
10:44:19 21 the panel knows, we're trying to go in  
10:44:21 22 sequence from intramuscular to --  
10:44:24 23 because there's fewer and fewer studies  
10:44:25 24 as we go along, so that's why we  
10:44:27 25 started with this.

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10:44:28 2 A. There's a chronologic aspect  
10:44:31 3 to this as well. This paper I think  
10:44:34 4 was one of the best early papers in  
10:44:36 5 this field was published in 1997. Then  
10:44:39 6 we have the Aguilera studies from '99  
10:44:42 7 and 2001, then the oral testosterone  
10:44:44 8 study from Baume we covered in 2006.  
10:44:47 9 And then we have the manuscript from  
10:44:48 10 Schaenzer which the version that we've  
10:44:50 11 looked at is from 2007. So there's --  
10:44:53 12 this really sort of sets the stage, if  
10:44:55 13 you will.

10:44:56 14 So what I wanted to see  
10:44:57 15 about the T/E ratios in this table,  
10:45:01 16 this is a good -- remember that these  
10:45:02 17 were Chinese athletes and the low-mode  
10:45:06 18 situation is more common in individuals  
10:45:08 19 of Asian ancestry. So on study day 1  
10:45:12 20 you're looking at the baseline values.  
10:45:14 21 What you can see that subject 1,  
10:45:16 22 subject 4, subject 5 are of the ones  
10:45:19 23 that we looked at, three of them are  
10:45:22 24 low mode individuals. So let's  
10:45:25 25 dispense with looking at their T/E

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10:45:27 2 ratios other than to note that even  
10:45:28 3 with the administration of a large dose  
10:45:30 4 of exogenous testosterone most time  
10:45:33 5 points they're not positive.

10:45:37 6 Q. Dr. Amory, let me interrupt  
10:45:39 7 you for a minute. Have you looked at  
10:45:40 8 whether or not Mr. Landis is low mode  
10:45:42 9 or not?

10:45:42 10 A. Mr. Landis is almost  
10:45:45 11 certainly a high-mode individual. I'm  
10:45:46 12 basing that -- if you go back to his  
10:45:49 13 results, you can see that his baseline  
10:45:53 14 T/E ratios are very close to one.  
10:45:54 15 That's not just from this data. Also  
10:45:56 16 there's quite a bit of longitudinal  
10:45:58 17 data that I was shown showing that his  
10:46:02 18 T/E ratio was one. So I would consider  
10:46:04 19 him to be a high-mode individual just  
10:46:06 20 for sake of clarity. So his T/E ratio  
10:46:08 21 should be positive with testosterone,  
10:46:10 22 similar to the Shackelton study.

10:46:11 23 So anyway, let's go back to  
10:46:14 24 that table. What I wanted to make  
10:46:18 25 here, so this is the study day on the



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10:46:19 2 left-hand column and what you're seeing  
10:46:22 3 here is these are the T/E ratios.  
10:46:24 4 Let's focus on subject 2 and 3. So  
10:46:26 5 they start out normal and then during  
10:46:29 6 the period where the testosterone is  
10:46:31 7 going to be highest in the first  
10:46:33 8 several days after injection you can  
10:46:34 9 see the T/E ratios are quite high. So  
10:46:37 10 kind of in the 20 to 60 range. And  
10:46:40 11 then they don't normalize again until  
10:46:43 12 approximately day 11. You can see that  
10:46:45 13 the value on day 11 is still abnormal  
10:46:48 14 and then the value on day 13 is back in  
10:46:50 15 the normal range. This is very  
10:46:52 16 consistent with what we know about the  
10:46:54 17 pharmacokinetics of an injection of  
10:46:56 18 testosterone enanthate and it parallels  
10:46:59 19 very nicely with when we saw the  
10:47:01 20 metabolites normalize from the figure  
10:47:03 21 we just looked at. So there's a really  
10:47:05 22 good association here between  
10:47:07 23 abnormalities in the metabolites and  
10:47:08 24 abnormalities in the T/E ratios.

10:47:11 25 MR. PAULSSON: And when the

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10:47:12 2 drop comes it's not gradual?

10:47:14 3 THE WITNESS: Certainly this

10:47:15 4 T/E ratio makes it looks like it's a

10:47:17 5 pretty quick dropoff. You're at a T/E

10:47:20 6 ratio of 25 to 33 and then you're back

10:47:22 7 into the normal range of 2 to 3. I

10:47:25 8 think more importantly in my mind I'm

10:47:27 9 thinking that there's a really good

10:47:29 10 association between when your T/E is

10:47:31 11 positive and when you're metabolites

10:47:32 12 are positive. In this study it seems

10:47:34 13 like it's a really good association.

10:47:39 14 Q. Why don't we turn now to the

10:47:42 15 Baume study.

10:47:47 16 MR. SUH: Todd, if you could

10:47:49 17 put together --

10:47:49 18 Q. In fact, Dr. Amory, if you

10:47:51 19 want to direct us to any particular

10:47:52 20 part of that study while we pull it up

10:47:55 21 on the slide.

10:47:55 22 A. I mean the important one is

10:47:57 23 figure 1 here. Unfortunately, you

10:48:02 24 know, they're using different

10:48:03 25 metabolites here as we discussed

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10:48:05 2 earlier. But it does again make the  
10:48:07 3 point that we were just discussing --  
10:48:10 4 I'll wait until you get the figure.  
10:48:20 5 No, figure 1, not table 1. You know  
10:48:36 6 what, I think you're looking -- there's  
10:48:38 7 two Baume 2006 articles, I think we  
10:48:41 8 want to refer to the one about IRMS,  
10:48:44 9 not the one about endurance. It looks  
10:48:46 10 like this, it's steroids 2006 volume  
10:48:52 11 71, Page 364. That's the Aguilera  
10:48:55 12 study you've got up there. We can talk  
10:48:57 13 about that since you've got it up  
10:48:58 14 there.

10:48:59 15 Q. Why don't we talk about  
10:49:00 16 that?

10:49:00 17 A. Fine, let's talk about  
10:49:03 18 Aguilera. We'll continue our  
10:49:04 19 chronological progression. So we  
10:49:04 20 looked at the Shackelton study from  
10:49:08 21 1997. Here's the Aguilera study from  
10:49:12 22 UCLA in 1999. Dr. Catlin is the senior  
10:49:15 23 author. You might want to blow that up  
10:49:17 24 even more because there's so much data  
10:49:19 25 there that it's difficult to see on the

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10:49:21 2 half screen.

10:49:26 3 Q. Maybe you could direct us to  
10:49:28 4 what part you're going to talk about  
10:49:29 5 first.

10:49:30 6 A. Unfortunately, you kind of  
10:49:32 7 need most of the table to really get  
10:49:34 8 the gist of it. Any way to maximize  
10:49:40 9 that?

10:49:49 10 Q. How about that?

10:49:49 11 A. That's better. So this is a  
10:49:54 12 study from 1999. This is where they  
10:49:57 13 looked at both of the T/E ratio and the  
10:50:00 14 changes in metabolites in 10 normal men  
10:50:03 15 who were administered exogenous  
10:50:05 16 testosterone. And here they gave the  
10:50:08 17 exogenous testosterone in two ways.  
10:50:10 18 The first five subjects got an  
10:50:12 19 intramuscular injection, the next five  
10:50:15 20 got an intravenous infusion which is a  
10:50:18 21 little unusual, but informative I  
10:50:20 22 think.

10:50:21 23 Just focusing on the T/E  
10:50:23 24 ratios which you see -- so this is in  
10:50:31 25 the left-hand column here are the 10

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10:50:33 2 subjects, A through J and then in this  
10:50:37 3 column are the T/E ratios and so what  
10:50:39 4 you can see is that baseline all of  
10:50:42 5 them are fairly normal. And then  
10:50:46 6 during the exogenous testosterone  
10:50:47 7 administration which again the first  
10:50:50 8 five subjects was via injection and the  
10:50:52 9 next five was via infusion. All the  
10:50:56 10 T/E ratios are quite positive here. So  
10:50:58 11 19, 53, 22, 10, 11, 10, etc.. at the  
10:51:03 12 same time, these two columns over here  
10:51:08 13 list what the delta/delta values of the  
10:51:11 14 metabolites are. And these columns in  
10:51:13 15 between are just the absolute values of  
10:51:15 16 metabolites. So we can kind of focus  
10:51:17 17 on these latter two columns.

10:51:20 18 The point I'd like to make  
10:51:21 19 about this study is that in all 10 of  
10:51:25 20 these individuals who were receiving  
10:51:26 21 exogenous testosterone, they had a  
10:51:29 22 positive T/E ratio and at the same time  
10:51:32 23 both of the metabolites were positive.  
10:51:35 24 So whereas in most cases the  
10:51:39 25 metabolites are close to one another in

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10:51:41 2 terms of their absolute magnitude,  
10:51:43 3 that's not universally true, but what  
10:51:45 4 is universally true is that both  
10:51:48 5 metabolites would be considered  
10:51:50 6 positive. At the same time, they had a  
10:51:54 7 T/E ratio that was positive.

10:51:55 8 So these 10 subjects all  
10:51:58 9 nicely sort of fit that definition of a  
10:52:00 10 positive test relying on both  
10:52:02 11 metabolites being positive and a T/E  
10:52:05 12 ratio being positive at the same time.

10:52:11 13 Q. Shall we turn to the Baume  
10:52:19 14 study?

10:52:19 15 A. Sure. No more questions  
10:52:25 16 about that. It's figure 1 in this  
10:52:43 17 paper.

10:52:43 18 MR. PAULSSON: Exhibit 43.

10:52:44 19 A. We looked at this already  
10:52:46 20 this morning. I think to reiterate.  
10:53:03 21 There you go.

10:53:12 22 Q. It looks like we almost hit  
10:53:13 23 it at random.

10:53:14 24 A. Good. So, and again, you  
10:53:18 25 know, just as in the Aguilera study

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10:53:22 2 where we saw, you know, all 10 of those  
10:53:24 3 individuals who had a positive T/E  
10:53:26 4 ratio simultaneously had positive  
10:53:28 5 metabolites. In the high-mode  
10:53:30 6 individuals in this study, so that is  
10:53:31 7 excluding individual S1, you can see  
10:53:34 8 also as well here the point we didn't  
10:53:37 9 really make this morning is when the  
10:53:38 10 metabolites are positive, the T/E ratio  
10:53:41 11 is also positive. And in fact, the two  
10:53:45 12 tests mirror each other reasonably  
10:53:48 13 well. So looking at individual S2 you  
10:53:50 14 can see the metabolites here, the  
10:53:51 15 delta/deltas are positive at the same  
10:53:53 16 time the T/E ratio reaches its maximum.  
10:53:55 17 And then as the delta/delta falls the  
10:53:57 18 T/E falls and then they normalize at  
10:54:00 19 the same time.

10:54:01 20 So we're seeing a good  
10:54:02 21 association here between the abnormal  
10:54:04 22 T/E and the abnormal delta/delta and  
10:54:07 23 this is now with oral testosterone. So  
10:54:09 24 the first studies that we talked about,  
10:54:11 25 the Shackelton study and the Aguilera

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10:54:13 2 study we saw this concordance with  
10:54:16 3 intramuscular testosterone. Now here's  
10:54:18 4 an example where we're seeing it with  
10:54:20 5 oral testosterone. And again, we're  
10:54:21 6 seeing very good associations between  
10:54:23 7 elevations in the T/E and the large  
10:54:25 8 delta/delta values for both of the  
10:54:27 9 metabolites. And that's not just  
10:54:29 10 subject S-2 to same could be said of  
10:54:31 11 subject S-4. You could see that the  
10:54:34 12 peak value in the T/E is the same time  
10:54:36 13 as you have the maximal values of the  
10:54:38 14 delta/delta. The same could be said in  
10:54:40 15 subject S-5 here, you see the T/E peaks  
10:54:44 16 similarly with the maximum value of the  
10:54:46 17 delta/deltas. The same is true of  
10:54:47 18 subject S-6 there where you see again  
10:54:52 19 the highest value for the T/E ratio  
10:54:55 20 occurs at the time that the highest  
10:54:56 21 value of the delta/deltas is occurring.  
10:54:58 22 And you can see that the values are  
10:55:01 23 returning to normal contemporaneously.  
10:55:03 24 The same is true for S-7.

10:55:05 25 Q. When you turn to GDC 1363,



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10:55:10 2 just compare that what you see in

10:55:14 3 that --

10:55:14 4 A. That's what we're not seeing

10:55:16 5 here. Somebody asked me about the

10:55:17 6 heart of the matter here. This is the

10:55:19 7 heart of the matter. The question is

10:55:21 8 in the studies, individuals who were

10:55:22 9 administered exogenous testosterone

10:55:25 10 have the metabolites moving in tandem

10:55:26 11 and having the T/E going up at the same

10:55:30 12 time, if this truly is testosterone

10:55:32 13 administration why are we not seeing

10:55:34 14 that here?

10:55:35 15 So this data here in

10:55:39 16 particular, you know, samples like this

10:55:40 17 where the alpha metabolite is markedly

10:55:44 18 positive, the beta metabolite is

10:55:47 19 normal, we're not seeing that sort of

10:55:49 20 difference with the intramuscular or

10:55:51 21 the oral testosterone. Moreover, we're

10:55:53 22 not seeing times when the metabolites

10:55:54 23 are abnormal and the T/E ratio is

10:55:56 24 normal. It's just inconsistent with

10:55:59 25 the data on the subjects from the

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10:56:01 2 Shackelton study, the Aguilera study,  
10:56:04 3 the Baume study, using both  
10:56:06 4 intramuscular infusion and then oral  
10:56:08 5 testosterone.

10:56:08 6 So this is concerning to me.  
10:56:10 7 I mean, you know, if I were on USADA's  
10:56:14 8 panel looking at this case, I'd have to  
10:56:16 9 kind of scratch my head and think  
10:56:17 10 what's going on here, why are these  
10:56:19 11 numbers different. Why don't these  
10:56:21 12 test results meet those three criteria  
10:56:24 13 that we know from the literature seem  
10:56:25 14 to apply fairly broadly.

10:56:33 15 Q. Let's turn to the Schaenzer  
10:56:36 16 study, which is Exhibit 34. And the  
10:56:50 17 appendix is 34-A. Could you comment on  
10:57:15 18 the Schaenzer study relative to what  
10:57:17 19 you saw in GDC 1363.

10:57:26 20 A. So just to remind the panel,  
10:57:30 21 this is the report from the Schaenzer  
10:57:33 22 group where they gave 18 men  
10:57:37 23 testosterone gel and some men, half the  
10:57:40 24 men received it a week on, a week off  
10:57:42 25 for six weeks and then half the men

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10:57:44 2 received it continuously. In this  
10:57:46 3 graph the red bars represent the time  
10:57:49 4 that the individual was taking the  
10:57:51 5 testosterone and the yellow bars at  
10:57:54 6 both ends represent the period of time  
10:57:56 7 when the individual was not being  
10:57:58 8 administering the testosterone. And so  
10:58:00 9 what you can see here is during  
10:58:02 10 testosterone administration, this is  
10:58:03 11 the T/E ratio on the Y axis here, all  
10:58:06 12 time points are positive and are  
10:58:08 13 dramatically positive during the period  
10:58:10 14 of testosterone administration and then  
10:58:12 15 immediately before and after the period  
10:58:14 16 of testosterone administration the T/E  
10:58:16 17 ratio goes down to approximately 1. So  
10:58:18 18 this is again a high-mode individual.

10:58:20 19 Now, there are -- so in this  
10:58:25 20 study, some of the subjects they went  
10:58:27 21 ahead and did the isotope ratio mass  
10:58:31 22 spec or the IRMS, and what's  
10:58:34 23 interesting here as we go through this,  
10:58:35 24 you'll see that sort of a little bit in  
10:58:37 25 contrast to some of the other studies

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10:58:39 2 there are some more differences between  
10:58:41 3 the alpha diol and the beta diol. So  
10:58:45 4 let's go through that.

10:58:46 5 Here is the androsterone and  
10:58:50 6 you'll notice that it does meet  
10:58:51 7 criteria of positivity during the  
10:58:54 8 period of testosterone administration.

10:58:56 9 This is the 5-alpha reduced metabolite  
10:59:00 10 of androstanediol. So again, if you  
10:59:04 11 thought that gel administration  
10:59:07 12 resulted in higher 5-alpha activity you  
10:59:09 13 might expect this to be increased  
10:59:11 14 preferentially over etiocholanolone I  
10:59:16 15 think as the next slide shows. Sorry,  
10:59:19 16 it's probably the one after that.

10:59:23 17 Oops. So here's the etiocholanolone.  
10:59:26 18 You can actually see that the absolute  
10:59:28 19 value of those delta/deltas is larger  
10:59:30 20 than the delta/deltas of the PD minus  
10:59:33 21 the androsterone. But again, these  
10:59:35 22 don't reach criteria for positivity.

10:59:37 23 So let's turn our attention  
10:59:39 24 to the alpha diol and the beta diol.

10:59:42 25 What you're looking at here -- so

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10:59:43 2 here's the alpha diol. Again, baseline  
10:59:46 3 after. And then you can see that  
10:59:47 4 during -- during the exposure period  
10:59:50 5 all of these values would be considered  
10:59:53 6 positive. Also I would just note that  
10:59:57 7 the largest value occurs during the  
10:59:59 8 last week and if you go back to the T/E  
11:00:03 9 slide, that was the time of the largest  
11:00:06 10 T/E.

11:00:06 11 So we're seeing reasonably  
11:00:09 12 good concordance here at least between  
11:00:12 13 the T/E and the 5-alpha diol  
11:00:14 14 metabolite.

11:00:15 15 MR. RIVKIN: Remind me the  
11:00:16 16 beta diol is the etio? Which of these  
11:00:20 17 charts shows the beta diol?

11:00:23 18 THE WITNESS: We're going to  
11:00:24 19 get to that right now.

11:00:25 20 A. We've talked about the  
11:00:27 21 Adiol, let's talk about the Bdiol. So  
11:00:29 22 here's the Adiol, just to remind you.  
11:00:31 23 And you can see that all of those time  
11:00:32 24 points are positive and they're most  
11:00:34 25 positive here at the last week when the

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11:00:37 2 T/E ratio was the most positive.

11:00:38 3 Let's look at the Bdiol now.

11:00:41 4 Q. Before we go on, this is a  
11:00:43 5 gel study?

11:00:44 6 A. This is a gel study and this  
11:00:45 7 is one subject we're looking at at this  
11:00:47 8 point in time which is P3.

11:00:49 9 Q. This shows the tracking of  
11:00:50 10 the alpha diol?

11:00:51 11 A. Over time.

11:00:52 12 Q. Over time as against and  
11:00:54 13 compared to the tracking of the T/E and  
11:01:05 14 they themselves are moving together.  
11:01:06 15 In other words, the higher the T/E the  
11:01:08 16 more negative the Adiol values?

11:01:11 17 A. Yes. When you say something  
11:01:16 18 like that it's always sort of a little  
11:01:19 19 bit hard because of course we're  
11:01:20 20 looking at a -- this is a single  
11:01:22 21 individual. So the statistical power  
11:01:24 22 that we have to sort of say those  
11:01:26 23 things in general is limited. But in  
11:01:28 24 this individual it is true that the  
11:01:31 25 largest felt value is associated with

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11:01:34 2 the largest delta/delta value of the  
11:01:37 3 Adiol. So just as in the other  
11:01:39 4 studies, those measurements are moving  
11:01:41 5 in a similar fashion.

11:01:42 6 Now, you asked about the  
11:01:44 7 Bdiol. Here it is here. So this is  
11:01:49 8 interesting. So, you know, the  
11:01:51 9 abnormal value, you know, whether you  
11:01:53 10 use a cutoff of 3 or 3.5, you can see  
11:01:55 11 that at many time points here,  
11:01:59 12 certainly in week 4 there and possibly  
11:02:01 13 in week 6 and 7, and maybe in week 9  
11:02:04 14 you are below that delta/delta value of  
11:02:08 15 3 which would be sort of the lowest  
11:02:10 16 that I would call something positive.  
11:02:11 17 You are positive here at week 10.  
11:02:14 18 Again, where we have the highest value  
11:02:16 19 of the Adiol and the highest value of  
11:02:18 20 the T/E.

11:02:19 21 So what does this tell us?  
11:02:21 22 Well, it tells us that in this  
11:02:22 23 individual, this person was taking  
11:02:25 24 testosterone, and their Adiol and their  
11:02:28 25 T/E were positive, but their Bdiol

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11:02:30 2 didn't always meet criteria for  
11:02:32 3 positivity here. So this is  
11:02:33 4 concerning. Because if your rule is  
11:02:36 5 that you've got to have a positive T/E  
11:02:38 6 and a positive Adiol and a positive  
11:02:41 7 Bdiol this individual may not have met  
11:02:43 8 all of those criteria at some of these  
11:02:46 9 time points.

11:02:46 10 And then point 2 is that  
11:02:48 11 what you can say about these numbers is  
11:02:50 12 even if they don't meet criteria for  
11:02:52 13 positivity they're not normal. The  
11:02:55 14 patient's baseline is down here.

11:02:56 15 And looking back at Mr.  
11:03:00 16 Landis' data, again, we have some of  
11:03:02 17 those values where the alpha diol is 4  
11:03:05 18 and the beta diol is 1. And that's  
11:03:08 19 very different from what we're seeing  
11:03:09 20 in this individual.

11:03:10 21 So although this individual  
11:03:12 22 doesn't meet all three criteria for  
11:03:14 23 positivity, at least the beta diol is  
11:03:17 24 close. We're not seeing values like  
11:03:21 25 we're seeing in Mr. Landis where the



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11:03:24 2 alpha diol is 4 and the beta diol is 1.  
11:03:27 3 Again, this is one individual from this  
11:03:30 4 study. So here are his numbers again.  
11:03:34 5 Can you blow that up just a little bit  
11:03:37 6 more. So remember that subject in the  
11:03:39 7 Schaenzer study we just looked at, his  
11:03:43 8 T/E values during the entire treatment  
11:03:44 9 period were positive. And his alpha  
11:03:48 10 diol values were positive during the  
11:03:50 11 entire period of time. And his beta  
11:03:52 12 diols although they weren't all  
11:03:53 13 positive, were close to positive. We  
11:03:56 14 didn't see anything like this where we  
11:03:58 15 saw an alpha diol measurement of 4, a  
11:04:00 16 T/E that was normal and a beta diol  
11:04:02 17 that was normal. Those two things are  
11:04:04 18 not similar in my mind. These results  
11:04:06 19 are not consistent with the results  
11:04:08 20 from that subject in the Schaenzer  
11:04:10 21 study.

11:04:11 22 MR. RIVKIN: Help me with  
11:04:13 23 something in understanding all this,  
11:04:14 24 which is that you've been going back  
11:04:18 25 and forth between the studies and the

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11:04:22 2 test results on Mr. Landis. The  
11:04:25 3 studies are all controlled?

11:04:29 4 THE WITNESS: Right.

11:04:29 5 MR. RIVKIN: We know exactly  
11:04:31 6 when the subjects received their  
11:04:33 7 testosterone, whether it's continuous  
11:04:34 8 or once, and then we're tracking them  
11:04:36 9 over a period of time.

11:04:37 10 THE WITNESS: That's right.  
11:04:38 11 It's much more controlled.

11:04:39 12 MR. RIVKIN: We have no  
11:04:40 13 idea, first of all, whether Mr. Landis  
11:04:42 14 was using testosterone, and if he was  
11:04:46 15 how he was using it, when he was using  
11:04:48 16 it, and so we have no idea at what  
11:04:52 17 point in time in these studies any of  
11:04:55 18 these results for Mr. Landis would  
11:04:58 19 relate. We don't know if it was  
11:05:00 20 shortly after use, whether it was days  
11:05:01 21 after use, whether it was not after use  
11:05:04 22 at all. So how do we draw conclusions  
11:05:08 23 that are helpful here?

11:05:09 24 THE WITNESS: It's a big  
11:05:11 25 challenge. I think you've correctly

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11:05:13 2 pointed out the problem is we don't  
11:05:14 3 have all the data that we would like to  
11:05:16 4 have. I mean we'd like to have -- from  
11:05:18 5 the Schaenzer study we're getting  
11:05:21 6 measurements once a week in guys who  
11:05:22 7 are taking testosterone. We're not  
11:05:24 8 getting measures over a course of time.  
11:05:26 9 We're not getting -- other than those  
11:05:29 10 longitudinal T/E ratios that we were  
11:05:30 11 shown earlier. We're not getting IRMS  
11:05:33 12 values over time. So we really have  
11:05:35 13 kind of limited information,  
11:05:37 14 particularly with gels, on which to  
11:05:39 15 base our conclusion. Unfortunately,  
11:05:41 16 scientifically we can only make the  
11:05:43 17 inferences that we can make based upon  
11:05:44 18 the data that we have. And I think  
11:05:46 19 there's an absence of knowledge here  
11:05:48 20 that's frustrating. I would like to  
11:05:50 21 see -- this is a study with 18 guys.  
11:05:53 22 You know, I would hope that they would  
11:05:56 23 do the IRMS on all of those subjects,  
11:05:59 24 that would provide us with it seems  
11:06:01 25 like an invaluable database in terms of

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11:06:03 2 knowing what sort of variation can we  
11:06:05 3 expect between individuals in the  
11:06:06 4 5-alpha diol and the 5-beta diol. Is  
11:06:10 5 this discrepancy between the 5-alpha  
11:06:12 6 diol and the 5-beta diol that was  
11:06:15 7 observed in subject P3 and to an extent  
11:06:18 8 in subject P9 that we haven't discussed  
11:06:20 9 using different metabolites, is that  
11:06:23 10 borne out in a larger sample size?  
11:06:24 11 That would be a very interesting  
11:06:26 12 question to know the answer to.

11:06:27 13 MR. RIVKIN: That's one set  
11:06:28 14 of issues, which is the sample size.  
11:06:30 15 The other is how these results relate  
11:06:34 16 to the time of --

11:06:34 17 THE WITNESS: That's exactly  
11:06:34 18 right.

11:06:37 19 MR. RIVKIN: And even the  
11:06:39 20 subjects that were receiving it on a  
11:06:41 21 regular basis were presumably taking it  
11:06:43 22 at the same time every day.

11:06:44 23 THE WITNESS: Exactly,  
11:06:45 24 exactly.

11:06:46 25 MR. RIVKIN: Again, we have

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11:06:47 2 no idea of what happened. But if these  
11:06:51 3 results that we're looking at on the  
11:06:52 4 chart now, 1363 seem random to some  
11:06:57 5 extent, as you're saying, couldn't that  
11:06:59 6 be simply because of the different  
11:07:03 7 timing of when the testosterone was  
11:07:05 8 taken if that's what was causing it.  
11:07:08 9 I'm just trying to --

11:07:09 10 THE WITNESS: I don't know,  
11:07:10 11 but I don't think so. I would like to  
11:07:12 12 see time course studies done with  
11:07:14 13 testosterone gel. But remember back to  
11:07:16 14 the Shackelton study. You know, we saw  
11:07:19 15 the values go up and then come down.  
11:07:21 16 So they were behaving in a fairly sort  
11:07:23 17 of predictable pattern and that was a  
11:07:26 18 nice study because we had time course  
11:07:28 19 data here. We don't have a time course  
11:07:30 20 study immediately after a dose  
11:07:32 21 application of the gel. You know, what  
11:07:34 22 is it 4 hours, what is it 8 hours, 12  
11:07:36 23 hours after. That's what we'd like to  
11:07:38 24 know.

11:07:38 25 But I will tell you that

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11:07:39 2 when the time course studies were done  
11:07:41 3 on other forms of testosterone, we  
11:07:42 4 didn't see results like this. We  
11:07:44 5 didn't see a guy who had a spike in his  
11:07:47 6 alpha diol and a normal beta diol. We  
11:07:50 7 just didn't see that. And we didn't  
11:07:52 8 see, you know, a guy have a huge alpha  
11:07:54 9 diol with again a high-mode individual  
11:07:56 10 who had a normal T/E ratio.

11:07:59 11 So you sense my frustration.

11:08:03 12 I wish we had more data here. But I  
11:08:05 13 will tell you that the pattern that I  
11:08:06 14 see here isn't really consistent with  
11:08:10 15 what we see from individuals who were  
11:08:14 16 given testosterone -- administered  
11:08:16 17 testosterone in a controlled setting.  
11:08:17 18 And so there are obviously caveats  
11:08:19 19 there. So extrapolating is always  
11:08:21 20 difficult, but that's extrapolations  
11:08:23 21 that I can make.

11:08:24 22 MR. RIVKIN: Thank you.

11:08:25 23 That's very helpful. Appreciate it.

11:08:26 24 Q. Maybe I'll just follow up  
11:08:28 25 with this one question. Dr. Amory, in

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11:08:29 2 your review of any of the studies or  
11:08:32 3 the studies you were asked about, have  
11:08:34 4 you seen this kind of pattern, this T/E  
11:08:38 5 5-alpha, 5-beta pattern in any of the  
11:08:42 6 studies in any of the subjects?

11:08:43 7 A. No. I mean it's, again,  
11:08:45 8 it's very -- some of these numbers are  
11:08:47 9 very strange and very at odds with  
11:08:49 10 what's reported. You know, in  
11:08:51 11 particular, something like this. That  
11:08:52 12 is a -- those are very strange numbers,  
11:08:55 13 so I mean that's the basis of my  
11:08:58 14 thinking about this case.

11:08:59 15 MR. RIVKIN: "Something like  
11:09:00 16 this," you're pointing to the July 22  
11:09:02 17 and 23?

11:09:03 18 THE WITNESS: Yes.

11:09:04 19 A. So here's a T/E ratio of 1,  
11:09:06 20 a totally normal beta diol and then a  
11:09:09 21 markedly positive alpha diol. I just  
11:09:13 22 haven't seen any results like that in  
11:09:15 23 any of the papers.

11:09:26 24 MR. SUH: Could you turn,  
11:09:28 25 Todd, to USADA 60, Exhibit 24.

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11:09:34 2 Q. Dr. Amory, you were asked  
11:09:36 3 about --

11:09:37 4 A. Can you give me a number.

11:09:38 5 Q. It will come up. It's a  
11:09:40 6 document out of the doc pack. This  
11:09:44 7 will be clear when you see it. You  
11:09:46 8 were asked earlier about the  
11:09:48 9 administration or possible  
11:09:49 10 administration of DHT in this case?

11:09:52 11 MR. SUH: And Todd, if you  
11:09:54 12 could blow up that center section.  
11:09:59 13 There you go.

11:10:00 14 A. You're looking at line  
11:10:02 15 number 9 there?

11:10:04 16 Q. Yes.

11:10:04 17 A. With the DHT value of zero.

11:10:07 18 Q. Can you render an opinion  
11:10:15 19 based upon the doc pack of whether or  
11:10:17 20 not there's a DHT issue in this case?

11:10:20 21 A. Yes, I mean a value of zero  
11:10:22 22 is inconsistent with doping with DHT.  
11:10:26 23 I mean I think all parties would agree  
11:10:28 24 to that.

11:10:46 25 Q. Before I get off this



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11:10:48 2 subject, by the way, of that last  
11:10:50 3 Schaenzer study, can you comment on the  
11:10:56 4 peer-review status and the peer-review  
11:10:59 5 nature of the paper?

11:10:59 6 A. Yes. So it's a bit of a  
11:11:03 7 mystery why we don't have the final  
11:11:05 8 version of this report in a published  
11:11:06 9 form. I would just add. They said  
11:11:09 10 over a year ago it was submitted for  
11:11:11 11 publication. It would be extremely  
11:11:13 12 unusual for a paper that was accepted  
11:11:14 13 to take this long to be published. I'm  
11:11:18 14 a little bit -- it's too bad. I mean I  
11:11:20 15 think we need -- if I were reviewing  
11:11:22 16 this paper there are several things  
11:11:24 17 that I would say, but one would be that  
11:11:26 18 we need more data. I really kind of  
11:11:29 19 view this as a fairly preliminary kind  
11:11:31 20 of report. It's not something that I  
11:11:32 21 consider in the same, at least held to  
11:11:35 22 the same standard as the published  
11:11:37 23 papers from Shackelton and Aguilera and  
11:11:40 24 Baume that we've talked about. It's  
11:11:41 25 sort of incomplete at this point. And

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11:11:43 2 why it's still incomplete over a year  
11:11:45 3 later is a mystery to me. It would be  
11:11:47 4 nice to have the rest of the dataset.  
11:11:50 5 Particularly because we don't have a  
11:11:52 6 lot of information about gels in this  
11:11:55 7 setting, so.

11:11:57 8 Q. Dr. Amory, are there any  
11:11:58 9 other papers that you would like to  
11:12:00 10 comment on in relation to 1363, any of  
11:12:03 11 the ones you've been asked about today  
11:12:05 12 or any others?

11:12:06 13 A. I think that -- I think  
11:12:15 14 we've covered what we need to cover.

11:12:35 15 MR. SUH: No further  
11:12:36 16 questions.

11:12:38 17 MR. PAULSSON: Dr. Amory,  
11:12:42 18 I'd like to understand the nature of  
11:12:45 19 your testimony. Let me see if I've  
11:12:50 20 understood it correctly from your point  
11:12:52 21 of view. It's for you to say. It  
11:12:54 22 seems to me that you are addressing  
11:12:58 23 science in the sense of proper  
11:13:01 24 evaluation of data as opposed to  
11:13:05 25 process. Let me explain what I

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11:13:08 2 understand the two to be. Process  
11:13:10 3 would be you don't -- there are  
11:13:15 4 criticisms elsewhere but it's not your  
11:13:17 5 subject, you're not addressing the  
11:13:19 6 handling of data, custody of samples,  
11:13:22 7 operation of devices, reading outcome  
11:13:27 8 from the devices, proper recording,  
11:13:30 9 that's not your subject, your subject  
11:13:32 10 is the premises of a study, the  
11:13:34 11 methodology and interpretation of data  
11:13:36 12 that is extant?

11:13:37 13 THE WITNESS: I think that's  
11:13:38 14 fair. I mean that's the field that I  
11:13:40 15 work in. Generating and interpreting  
11:13:44 16 data for clinical studies and then  
11:13:46 17 reviewing them.

11:13:47 18 MR. PAULSSON: If that is  
11:13:49 19 so, you tell us in your written report  
11:13:55 20 that in this case you're working pro  
11:13:57 21 bono because it seems that you're  
11:14:02 22 offended on a moral and ethical ground.  
11:14:06 23 I find that difficult to follow. If  
11:14:09 24 your testimony has to do with science  
11:14:11 25 and divergences as to opinion between

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11:14:15 2 scientist, I don't understand where  
11:14:16 3 morality or ethics come in because that  
11:14:19 4 would seem to be in the domain of  
11:14:22 5 prevarication, chicanery, bad faith,  
11:14:25 6 mischievous intentions. And I don't  
11:14:27 7 understand why that sentence appears in  
11:14:31 8 your report.

11:14:32 9 THE WITNESS: So I've been  
11:14:33 10 asked by several people why I chose to  
11:14:35 11 work in this case pro bono and I guess  
11:14:38 12 my response would be twofold. The  
11:14:40 13 first is that I actually still am on --  
11:14:43 14 since 2004 I've been a consultant for  
11:14:46 15 USADA. And I've worked on some cases  
11:14:49 16 for them. And firstly, I didn't think  
11:14:51 17 it was appropriate to be still listed  
11:14:53 18 as a consultant for them and then also  
11:14:55 19 to be testifying against one of their  
11:14:57 20 cases in such a proceeding.

11:15:00 21 And then the second issue  
11:15:01 22 that you raise, I see this more as a  
11:15:06 23 scientific issue than an ethical or  
11:15:08 24 moral one. But I do think that sort of  
11:15:14 25 given my reading of the literature,

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11:15:15 2 that it wouldn't be appropriate for me  
11:15:16 3 to just sort of stand idly by and see  
11:15:19 4 somebody who I think doesn't actually  
11:15:22 5 meet the criteria for doping be  
11:15:26 6 convicted of doping.

11:15:27 7 So I guess from a moral  
11:15:30 8 standpoint I think the response there  
11:15:32 9 is that I think it is an obligation of  
11:15:33 10 individuals when they think something  
11:15:35 11 incorrect is happening to object to it.  
11:15:38 12 And that's the basis for me coming.

11:15:41 13 MR. PAULSSON: Well that is  
11:15:42 14 a positive sense of moral. You are  
11:15:44 15 positively impelled.

11:15:46 16 THE WITNESS: I think it's  
11:15:47 17 -- exactly, I think it's important that  
11:15:49 18 people do the things that they think  
11:15:51 19 are right.

11:15:51 20 MR. PAULSSON: However, the  
11:15:54 21 sentence to which you subscribed in  
11:15:56 22 your witness statement says "To uphold  
11:15:58 23 an Anti-Doping sanction on the evidence  
11:16:01 24 of this case is morally and ethically  
11:16:03 25 wrong." This has nothing to do with

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11:16:06 2 your moral duty. And I'm surprised  
11:16:08 3 because if you're having, as I've  
11:16:09 4 defined and you've agreed to the nature  
11:16:11 5 of your testimony, I find it odd. I am  
11:16:15 6 searching for an explanation what the  
11:16:17 7 moral and ethical dimension is of the  
11:16:21 8 divergence as to scientific posture is?

11:16:24 9 THE WITNESS: I guess I just  
11:16:25 10 viewed that more as it was somebody's  
11:16:27 11 responsibility to sort of testify to  
11:16:29 12 what they thought was a correct  
11:16:31 13 interpretation of the literature.

11:16:32 14 MR. PAULSSON: That's fine.

11:16:34 15 MR. RIVKIN: Those questions  
11:16:38 16 lead to another question for me, which  
11:16:45 17 is you said you didn't think that these  
11:16:46 18 results showed a positive, showed a  
11:16:50 19 violation. You testified earlier that  
11:16:53 20 under the USADA standards that you were  
11:16:55 21 comfortable using a positive T/E ratio  
11:16:59 22 and a positive for two metabolites  
11:17:05 23 would be sufficient.

11:17:06 24 THE WITNESS: That's right.

11:17:07 25 MR. RIVKIN: And putting

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11:17:08 2 aside -- I understand there are issues  
11:17:11 3 about the validity of the testing and  
11:17:16 4 so forth. But just looking at the  
11:17:18 5 numbers for the July 20th tests, those  
11:17:23 6 would be a positive, right?

11:17:25 7 THE WITNESS: The numbers  
11:17:27 8 from July 20th meet two of three  
11:17:29 9 criteria for positivity. So the T/E  
11:17:32 10 ratio is positive, the 5-alpha diol is  
11:17:35 11 positive, but the 5-beta diol is not.  
11:17:38 12 So the delta/delta value of 5-beta diol  
11:17:42 13 on July 20th was 2.65. There you can  
11:17:45 14 see it right there. So this I would  
11:17:50 15 consider to be one of the three  
11:17:51 16 criteria, this would be the second of  
11:17:53 17 the three, and this one doesn't meet  
11:17:55 18 the criteria.

11:17:56 19 So in my mind, you know, you  
11:17:59 20 have to meet the three criteria to  
11:18:01 21 prevent, you know, somebody being  
11:18:04 22 accused of doping falsely.

11:18:06 23 MR. RIVKIN: Those are the  
11:18:09 24 criteria that you understand USADA  
11:18:11 25 asked you to apply?

1 JOHN AMORY - RECROSS

11:18:12 2 THE WITNESS: That's what I  
11:18:12 3 was instructed. Also, I think that  
11:18:14 4 those criteria are good ones based upon  
11:18:18 5 what we've discussed in the literature,  
11:18:19 6 that the subjects who were administered  
11:18:21 7 exogenous testosterone met that  
11:18:22 8 criteria as long as they were high-mode  
11:18:25 9 individuals.

11:18:28 10 MR. RIVKIN: All right.  
11:18:31 11 Thank you.

11:18:32 12 THE PRESIDENT: I have no  
11:18:37 13 questions, thank you very much. I'll  
11:18:39 14 just ask whether counsel have any  
11:18:40 15 questions arising from the panel's  
11:18:42 16 questions a moment ago?

11:18:45 17 MR. YOUNG: Could you put  
11:18:47 18 that back up, please.

11:18:49 19 RECROSS EXAMINATION

11:18:50 20 BY MR. YOUNG:

11:18:51 21 Q. Just one very quick  
11:18:53 22 question. On July 20th Mr. Landis does  
11:18:55 23 have two metabolites greater than  
11:18:59 24 three; isn't that correct? There's the  
11:19:01 25 6.39 and 3.51?



1 JOHN AMORY - RECROSS

11:19:04 2 A. Yes. The andro is -- would  
11:19:08 3 be considered positive, but those  
11:19:09 4 aren't the metabolites that I've used  
11:19:12 5 in the cases before. We focused on the  
11:19:14 6 alpha and the beta diol.

11:19:15 7 Q. That's all UCLA did, it  
11:19:18 8 didn't do the other two?

11:19:19 9 A. That's right. So it's hard  
11:19:20 10 to extrapolate to the use of the other  
11:19:23 11 diols -- to the other metabolites.

11:19:25 12 Q. When we talk about the  
11:19:26 13 cases, you only saw two cases in your  
11:19:29 14 whole career?

11:19:29 15 A. Two cases and then I think  
11:19:31 16 as we've discussed, at least 20 or 30  
11:19:34 17 cases in the literature where all the  
11:19:35 18 individuals had all three criteria.  
11:19:38 19 So, you know, when we start to get to  
11:19:40 20 that sort of numbers, start thinking  
11:19:42 21 that that's a good -- those three  
11:19:44 22 criteria are good and they do fit.  
11:19:46 23 They are associated with what we know  
11:19:48 24 to be the use of exogenous  
11:19:50 25 testosterone.

1 JOHN AMORY - REDIRECT

11:19:50 2 Q. And are you familiar with  
11:19:54 3 the criteria that was promulgated by  
11:19:56 4 the World Anti-Doping Agency?

11:19:59 5 A. Yes. So in those criteria  
11:20:01 6 they talk of using one metabolite.

11:20:04 7 MR. YOUNG: I have no  
11:20:05 8 further questions.

11:20:07 9 REDIRECT EXAMINATION

11:20:10 10 BY MR. SUH:

11:20:10 11 Q. Two quick follow-up  
11:20:12 12 questions. The endogenous reference  
11:20:14 13 compound used by UCLA, is it the same  
11:20:16 14 or different than the one used here?

11:20:17 15 A. The pregnanediol?

11:20:19 16 Q. The 11 ketoetio?

11:20:21 17 A. Thank you. The pregnanediol  
11:20:23 18 is, but the 11 ketoetio isn't. I think  
11:20:26 19 your point goes to if it's a different  
11:20:28 20 exogenous reference compound then is it  
11:20:30 21 truly positive or not.

11:20:31 22 Q. Also, did Mr. Young account  
11:20:33 23 for the LNDD measurement of error of  
11:20:38 24 .8?

11:20:38 25 A. Oh, did he? It doesn't

1 JOHN AMORY - RECROSS/REDIRECT

11:20:40 2 appear, no, because if you subtract .8

11:20:43 3 from that you get 2.7.

11:20:43 4 MR. SUH: Just a short

11:20:45 5 follow-up.

11:20:45 6 RECROSS EXAMINATION

11:20:49 7 BY MR. YOUNG:

11:20:49 8 Q. And UCLA doesn't apply any

11:20:52 9 measure of uncertainty, they just take

11:20:55 10 the straight value; isn't that right?

11:20:57 11 A. Yes.

11:20:58 12 REDIRECT EXAMINATION

11:21:00 13 BY MR. SUH:

11:21:00 14 Q. But using a different

11:21:01 15 exogenous reference compound?

11:21:02 16 A. Yes.

11:21:05 17 THE PRESIDENT: Very well.

11:21:05 18 Thank you very much.

11:21:06 19 THE WITNESS: Thank you very

11:21:07 20 much.

11:21:22 21 MR. WEISS: Mr. Rivkin, if I

11:21:27 22 may, earlier when I gave you the

11:21:29 23 exhibits for the UCLA letter that Dr.

11:21:32 24 Amory was reading from, that was

11:21:34 25 actually to the exhibit earlier from

1 P R O C E E D I N G S

11:21:36 2 the hearing below. Dr. Amory has the  
11:21:40 3 actual letter Dr. Amory received from  
11:21:44 4 USADA, so there's actually two  
11:21:45 5 exhibits. And the proper exhibit that  
11:21:47 6 Dr. Amory received was GDC 1569 through  
11:21:53 7 GDC 1571.

11:21:59 8 THE PRESIDENT: Thanks very  
11:22:00 9 much for that clarification. We'll  
11:22:03 10 take the morning break. Before we do  
11:22:05 11 that, is Dr. Davis the next witness?

11:22:08 12 MR. SUH: Yes.

11:22:11 13 THE PRESIDENT: Mr. Young,  
11:22:16 14 so far as the demonstration is  
11:22:18 15 concerned, what's the position in view  
11:22:19 16 of the tribunal's comments yesterday?

11:22:24 17 MR. YOUNG: We went there  
11:22:25 18 and it didn't work.

11:22:27 19 MR. DUNN: Good morning.  
11:22:29 20 I'm Dan Dunn, Richard's partner. We  
11:22:32 21 went over to Gibson Dunn & Crutcher's  
11:22:36 22 New York office to view the  
11:22:37 23 demonstration that we understood Mr.  
11:22:39 24 Davis was going to present to this  
11:22:41 25 panel today and we did have the

1 P R O C E E D I N G S

11:22:45 2 opportunity to see Dr. Davis pull up a  
11:22:49 3 few screens on his computer and  
11:22:53 4 manually adjust the peak integration  
11:22:57 5 parameters, and the background level,  
11:23:01 6 but we were unable to view or see any  
11:23:06 7 analysis or calculations or any  
11:23:09 8 functionality, only simply the very  
11:23:13 9 modest demonstration of how an operator  
11:23:16 10 can move a peak start and stop and  
11:23:19 11 adjust the background. Because there  
11:23:22 12 wasn't a necessary piece of equipment,  
11:23:25 13 I understand, there was no ability to  
11:23:29 14 show any analysis or calculations.

11:23:32 15 And I think Dr. Davis'  
11:23:37 16 demonstration took approximately one  
11:23:41 17 minute, and when we asked whether he  
11:23:46 18 was going to attempt to illustrate  
11:23:51 19 besides simply here's how you move a  
11:23:54 20 peak, whether he was going to also  
11:23:56 21 attempt to illustrate how the LNDD  
11:24:00 22 operators moved their peaks with regard  
11:24:03 23 to these samples, we did not get a  
11:24:06 24 clear answer. So we're not quite sure  
11:24:08 25 what the purpose of the demonstration

1 P R O C E E D I N G S

11:24:10 2 is. But as long as it's limited to  
11:24:13 3 strictly what we saw last night, and  
11:24:17 4 does not involve any calculations, does  
11:24:20 5 not involve any attempted illustration  
11:24:23 6 about what the LNDD operators did when  
11:24:26 7 he observed them, and as long as we  
11:24:28 8 have the same equipment that we were  
11:24:30 9 able to see last night, we're fine with  
11:24:35 10 him proceeding.

11:24:36 11 But if it should go farther  
11:24:38 12 than that, then we would have an  
11:24:39 13 objection because we haven't had a  
11:24:41 14 chance to do it.

11:24:42 15 We were also unable to copy  
11:24:45 16 any of the screens or files. We were  
11:24:48 17 unable to export any of the data files  
11:24:50 18 that were embedded in whatever we were  
11:24:53 19 looking at. Despite our expert's 20  
11:24:57 20 minutes of trying to figure that out,  
11:25:00 21 that was not able to be done.

11:25:01 22 So that's what happened last  
11:25:05 23 night. And subject to those  
11:25:07 24 reservations and limitations we're  
11:25:11 25 prepared to proceed.

1 P R O C E E D I N G S

11:25:13 2 MR. YOUNG: Can we have a  
11:25:15 3 representation that what we're going to  
11:25:16 4 get is about a one minute presentation  
11:25:18 5 by Dr. Davis showing just that?

11:25:22 6 MR. WEISS: If I may, I  
11:25:25 7 believe Mr. Dunn's characterization of  
11:25:26 8 what occurred last night is completely  
11:25:28 9 incorrect. What occurred was that Mr.  
11:25:30 10 Davis performed the demonstration of  
11:25:32 11 moving the start and end peaks, the  
11:25:34 12 background contraction, the map editor  
11:25:41 13 and the ISO shift. The calculations of  
11:25:47 14 what Mr. Dunn is speaking of are  
11:25:49 15 actually embedded into the software.  
11:25:51 16 We have the proper software version  
11:25:54 17 that the LNDD computer, the OS/2 and  
11:25:57 18 the IsoPrime used. Those calculations  
11:25:59 19 are embedded into the software. So if  
11:26:01 20 you have the software you have the  
11:26:04 21 proper calculations.

11:26:06 22 We also let three of USADA's  
11:26:09 23 experts, Dr. Jumeau, Dr. Brenna and  
11:26:13 24 Dr. Matthews use the OS/2 system for  
11:26:16 25 about 35 minutes to look through any

1 P R O C E E D I N G S

11:26:20 2 heading, to read all parameters. Now,  
11:26:22 3 I believe the difficulty of what Mr.  
11:26:24 4 Dunn is saying is that their experts  
11:26:27 5 were sufficiently familiar with the  
11:26:30 6 OS/2 software to actually determine the  
11:26:33 7 calculations or to obtain the right  
11:26:35 8 parameters. It's been represented that  
11:26:37 9 these are experts, that Dr. Jumeau  
11:26:40 10 authored this software used by IsoPrime  
11:26:43 11 -- used by LNDD in the IsoPrime  
11:26:46 12 machine. And it's true that Dr. Davis  
11:26:48 13 did not show them how to obtain the  
11:26:51 14 data, but again, they're experts with  
11:26:54 15 respect to the machine and in regards  
11:26:55 16 to the printing it or the screen shots,  
11:26:58 17 the machine is not capable of doing so.  
11:27:01 18 What I told Mr. Dunn and what his  
11:27:03 19 experts had an opportunity to do was to  
11:27:05 20 look through every parameter that is on  
11:27:07 21 the machine and to write it down.  
11:27:09 22 There was simply no way to print them  
11:27:12 23 out at that time.

11:27:13 24 But they were given plenty  
11:27:15 25 of opportunity to obtain as much



1 P R O C E E D I N G S

11:27:17 2 information as they wanted and before  
11:27:18 3 they left I confirmed there was no more  
11:27:21 4 information they wanted.

11:27:21 5 Then I asked if they would  
11:27:24 6 confirm that they would be able to use,  
11:27:25 7 that this is the proper software and  
11:27:27 8 the proper computer used for the  
11:27:30 9 IsoPrime 1, if they had any other  
11:27:33 10 questions, if they would raise them now  
11:27:35 11 and we can deal with it. Again, at  
11:27:38 12 that time Mr. Dunn said he couldn't  
11:27:39 13 talk about it, he didn't fully  
11:27:41 14 understand and we can ask the witnesses  
11:27:43 15 tomorrow.

11:27:44 16 So the fact that they're  
11:27:45 17 raising these issues now when it could  
11:27:46 18 have been dealt with last night is a  
11:27:48 19 little bit disingenuous.

11:27:50 20 Second, I think what they're  
11:27:51 21 asking for is they would have preferred  
11:27:53 22 to have the EDFs. We asked for that  
11:27:56 23 for the actual samples in this case and  
11:27:57 24 we were not provided the EDFs by LNDD.

11:28:04 25 MR. YOUNG: We've been

1 P R O C E E D I N G S

11:28:05 2 through this issue in this case already  
11:28:07 3 once.

11:28:08 4 THE PRESIDENT: I got the  
11:28:09 5 feeling we were having a replay.

11:28:12 6 MR. YOUNG: We've been  
11:28:13 7 through this issue in this case once  
11:28:15 8 before.

11:28:16 9 MR. WEISS: If I may, I'm  
11:28:18 10 not trying to relitigate the EDFs. I'm  
11:28:21 11 trying to show the comparison of the  
11:28:24 12 importance of the EDFs that in this  
11:28:26 13 simple demonstration of Dr. Davis  
11:28:30 14 showing how the manual process works,  
11:28:31 15 that they insisted on having EDFs.

11:28:39 16 MR. YOUNG: So if the  
11:28:40 17 demonstration that we see today is the  
11:28:45 18 same one minute demonstration that the  
11:28:49 19 experts saw last night, that's fine.  
11:28:52 20 What is missing was the printer and  
11:29:00 21 without the printer you can't hit the  
11:29:03 22 button, as I understand it, that says  
11:29:09 23 calculate. As you move the points  
11:29:11 24 you'll see delta values change, but  
11:29:14 25 there is a -- there is a button that

1 P R O C E E D I N G S

11:29:17 2 says calculate and that's what gives  
11:29:19 3 you the result.

11:29:23 4 And we have the same problem  
11:29:25 5 when they gave us the instrument in  
11:29:27 6 Malibu, and they acknowledged that at  
11:29:33 7 Page 1908 of the transcript below when  
11:29:37 8 Mr. Scott said that "Unfortunately, the  
11:29:42 9 OS/2 crashes without a printer and our  
11:29:47 10 printer is connected to this machine so  
11:29:50 11 until we take a break we're not going  
11:29:52 12 to be able to print out those things."  
11:29:54 13 So that's --

11:29:57 14 THE PRESIDENT: Mr. Young,  
11:29:59 15 the view of the panel is that we're  
11:30:02 16 dealing here with a demonstration and  
11:30:07 17 whether it should be permitted. What  
11:30:09 18 weight we give to it is of course  
11:30:12 19 entirely another matter. I think we've  
11:30:14 20 heard enough, perhaps too much from  
11:30:17 21 both sides already and we're not going  
11:30:19 22 to prolong this. Our ruling is that  
11:30:21 23 the demonstration will proceed. And  
11:30:24 24 you, of course, will have the right,  
11:30:26 25 and your experts to make any

1 P R O C E E D I N G S

11:30:29 2 observations you wish at the  
11:30:30 3 appropriate time.

11:30:31 4 So having said that, we are  
11:30:35 5 now entitled to our morning coffee  
11:30:38 6 which we'll have for 15 minutes and  
11:30:40 7 then we'll hear from Dr. Davis.

11:30:44 8 (A recess was taken.)

11:58:57 9 THE PRESIDENT: Mr. Suh, are  
11:58:58 10 you ready to proceed?

11:59:00 11 MR. SUH: Yes, I am.

11:59:02 12 MR. DUNN: Mr. Williams, may  
11:59:04 13 I introduce new participants in the  
11:59:05 14 room whom you haven't met yet.

11:59:05 15 THE PRESIDENT: Thank you  
11:59:05 16 very much.

11:59:08 17 MR. DUNN: All of these  
11:59:09 18 ladies are from LNDD in Paris.  
11:59:12 19 Starting closest to me is Dr. Buisson,  
11:59:14 20 Corinne Buisson. And sitting next to  
11:59:16 21 her is Cynthia Mongongu, one of the  
11:59:19 22 operators. And then last but not least  
11:59:21 23 is Claire Frelat, another one of the  
11:59:25 24 LNDD operators.

11:59:26 25 THE PRESIDENT: Good

1 P R O C E E D I N G S

11:59:27 2 morning. And it's nice to see you in  
11:59:32 3 person. We've seen your photographs on  
11:59:33 4 the screen, but now we have the real  
11:59:35 5 thing here.

11:59:36 6 Mr. Suh, are you ready to  
11:59:54 7 proceed?

11:59:55 8 MR. SUH: I am. The witness  
11:59:59 9 has been sworn?

12:00:00 10 THE PRESIDENT: Very good  
12:00:01 11 question. Do you declare and affirm  
12:00:03 12 the opinions you express today will be  
12:00:05 13 your honest opinions?

12:00:07 14 DR. DAVIS: I do.

12:00:08 15 THE PRESIDENT: Thank you  
12:00:08 16 very much.

17 S I M O N D A V I S,  
18 called as a witness on behalf of the  
19 Appellant, having been first duly  
20 affirmed by the President, was examined  
21 and testified as follows:

22 DIRECT EXAMINATION

12:00:20 23 BY MR. SUH:

12:00:20 24 Q. Dr. Davis, have you  
12:00:22 25 submitted a declaration in connection

1 SIMON DAVIS - DIRECT

12:00:24 2 with the proceeding here today?

12:00:25 3 A. I have.

12:00:26 4 Q. And do you affirm that its

12:00:28 5 contents are true and accurate?

12:00:30 6 A. I do.

12:00:31 7 Q. With respect to the

12:00:39 8 demonstration you're about to perform,

12:00:43 9 first of all, could you briefly explain

12:00:45 10 the machine you have in front of you.

12:00:48 11 A. I have rather an old

12:00:52 12 computer. It dates back probably to

12:00:54 13 middle of the 1980s. It's

12:00:56 14 contemporaneous with Windows 3.1. It

12:01:00 15 runs off an operating system known as

12:01:02 16 OS/2 which was first developed by IBM.

12:01:05 17 It's actually a very good operating

12:01:06 18 system, still used today for many of

12:01:09 19 the ATM machines that we have around

12:01:11 20 the city. It obviously didn't quite

12:01:13 21 win out in the battle for operating

12:01:15 22 systems. There was the system of

12:01:16 23 choice at the time for Micromass to run

12:01:21 24 their stable isotope ratio mass

12:01:25 25 spectrometers from.

1 SIMON DAVIS - DIRECT

12:01:28 2 THE PRESIDENT: You are  
12:01:28 3 swinging around away from the mic.

12:01:32 4 MR. RIVKIN: Put the  
12:01:34 5 microphone towards us rather than Mr.  
12:01:36 6 Suh.

12:01:41 7 Q. And the software that you  
12:01:45 8 have of which a screen shot appears now  
12:01:49 9 on the screen in front of you and on  
12:01:51 10 the large screen in the room, could you  
12:01:53 11 describe the software?

12:01:54 12 A. We have a number of elements  
12:01:57 13 to the software. We have the actual  
12:02:00 14 software which runs the instrument  
12:02:02 15 itself. Now, unfortunately we can't do  
12:02:03 16 that today because we actually need the  
12:02:05 17 instrument to be present to communicate  
12:02:07 18 with the electronics. But we do have  
12:02:10 19 --

12:02:11 20 THE PRESIDENT: Did you have  
12:02:12 21 that in the hearing below when you did  
12:02:13 22 the demonstration?

12:02:14 23 THE WITNESS: No, we didn't,  
12:02:15 24 no.

12:02:16 25 Q. For clarity's sake, when you

1 SIMON DAVIS - DIRECT

12:02:17 2 say the instrument, do you mean the  
12:02:19 3 IRMS instrument?

12:02:19 4 A. The IRMS instrument, that's  
12:02:22 5 correct.

12:02:22 6 Then as part --

12:02:24 7 THE PRESIDENT: Just before  
12:02:25 8 we proceed, this may be a silly  
12:02:28 9 question, but why couldn't you get that  
12:02:30 10 here? Is it no longer --

12:02:33 11 THE WITNESS: They're very  
12:02:34 12 expensive and people are very reluctant  
12:02:36 13 to move them. There are only a few of  
12:02:39 14 them left in the world, less than 10.  
12:02:41 15 So most people hang on to them.

12:02:44 16 A. We also have an offline  
12:02:46 17 version of the system which is the GC  
12:02:48 18 offline. This allows you to explore  
12:02:51 19 the software and set up method files  
12:02:54 20 and various other parameters without  
12:02:56 21 having to be connected to the machine.  
12:02:58 22 Also allows a sharing of data and  
12:03:00 23 various other aspects.

12:03:01 24 We have data processing  
12:03:05 25 software. This is common to both the



1 SIMON DAVIS - DIRECT

12:03:07 2 online and the offline system. So it's  
12:03:10 3 the software which we'll be using in  
12:03:12 4 the brief demonstration today.

12:03:14 5 At the very end we have the  
12:03:17 6 map editor, and this is a new feature  
12:03:21 7 to the Isochrom, because all the  
12:03:24 8 electronics changed between the  
12:03:26 9 Isochrom and the IsoPrime. This was a  
12:03:29 10 bridging software, the acquisition of  
12:03:31 11 data which allowed you to do hydrogen  
12:03:33 12 and the other things which the Isochrom  
12:03:34 13 couldn't do but could do on the  
12:03:36 14 IsoPrime.

12:03:37 15 THE PRESIDENT: Just slow  
12:03:39 16 down because you're going at a fair  
12:03:41 17 speed with some big words.

12:03:42 18 MR. RIVKIN: Also be sure to  
12:03:44 19 enunciate IsoPrime and Isochrom because  
12:03:48 20 we have to make sure Gail gets the  
12:03:51 21 difference.

12:03:53 22 THE WITNESS: Okay.

12:03:54 23 Q. Dr. Davis, do you know what,  
12:03:56 24 for clarity's sake I'm going to take  
12:03:58 25 you through this just bit by bit so

1 SIMON DAVIS - DIRECT

12:04:02 2 that it's -- before you dive into the  
12:04:04 3 software. First, is this version of  
12:04:08 4 the software on your instrument the  
12:04:12 5 same version of the software used by  
12:04:14 6 LNDD in their IsoPrime instrument?

12:04:19 7 A. That's correct, it's version  
12:04:20 8 1.67 release 2 and you'll see it  
12:04:23 9 attached when we actually open up the  
12:04:25 10 software.

12:04:26 11 Q. Again, for clarity's sake,  
12:04:27 12 there are two IsoPrime instruments that  
12:04:31 13 are relevant to this case, correct?

12:04:33 14 A. That's correct, yes.

12:04:34 15 Q. And one version is the one  
12:04:36 16 used on an older instrument and one --  
12:04:40 17 and there is also a newer version of  
12:04:42 18 the IsoPrime instrument?

12:04:43 19 A. That's correct.

12:04:44 20 Q. And again, for ease of  
12:04:47 21 reference I'm going to call the older  
12:04:49 22 one the IsoPrime 1 and the newer one  
12:04:52 23 IsoPrime 2.

12:04:53 24 A. Okay.

12:04:54 25 Q. Can you tell us which sample

1 SIMON DAVIS - DIRECT

12:04:56 2 or samples will run on the IsoPrime 1?

12:04:59 3 A. The IsoPrime 1, the samples

12:05:03 4 that run were the original samples used

12:05:05 5 for the adverse finding which we're

12:05:09 6 discussing today.

12:05:11 7 Q. Which is the sample 995474?

12:05:13 8 A. That's correct.

12:05:14 9 Q. The stage 17 sample?

12:05:15 10 A. Yes.

12:05:15 11 Q. And all of the other samples

12:05:17 12 were run on the IsoPrime 2?

12:05:18 13 A. That's correct, yes.

12:05:19 14 Q. And the IsoPrime 2 runs a

12:05:22 15 different version of the software?

12:05:23 16 A. Well --

12:05:24 17 Q. A different --

12:05:26 18 A. It's not a different

12:05:27 19 version. Totally different software.

12:05:29 20 Q. Excuse me, different

12:05:30 21 software?

12:05:30 22 A. Yes.

12:05:30 23 Q. IsoPrime 2, different

12:05:32 24 software. What is the name of that

12:05:34 25 software?

1 SIMON DAVIS - DIRECT

12:05:34 2 A. That's MassLynx which runs  
12:05:36 3 under Windows XP or NT.

12:05:38 4 Q. And IsoPrime 1, this is a  
12:05:40 5 version that you have in front of you  
12:05:41 6 right now?

12:05:42 7 A. That's correct, yes.

12:05:42 8 Q. Could you compare briefly,  
12:05:45 9 compare briefly the difference between  
12:05:46 10 the OS/2 software you have in front of  
12:05:52 11 you now and the MassLynx software which  
12:05:55 12 is in the IsoPrime 2.

12:05:57 13 A. Well, apart from the  
12:05:59 14 obvious, that it runs under a different  
12:06:01 15 operating system, the MassLynx is a far  
12:06:03 16 more modern piece of software  
12:06:05 17 engineering with very different  
12:06:06 18 algorithms for peak detection, peak  
12:06:10 19 integration. Which is borne out by the  
12:06:12 20 fact that the operators at LNDD very  
12:06:14 21 rarely have to manually integrate any  
12:06:17 22 peaks on the IsoPrime but you virtually  
12:06:20 23 always have to do so on the OS/2  
12:06:22 24 system.

12:06:27 25 Q. So the integration that --

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12:06:33 2 the procedures you're going to perform  
12:06:35 3 today or demonstrate today are for the  
12:06:38 4 IsoPrime 1 and OS/2 which was the  
12:06:41 5 instrument and software used for the  
12:06:43 6 processing of the sample 995474?

12:06:46 7 A. That's correct.

12:06:47 8 Q. And have you prior to today  
12:06:50 9 had the opportunity to see the  
12:06:53 10 procedures and techniques used by the  
12:06:56 11 laboratory technicians at LNDD as to  
12:07:00 12 their -- what we'll refer to as manual  
12:07:04 13 processing?

12:07:05 14 A. I have, yes.

12:07:05 15 Q. And was that when you went  
12:07:07 16 to watch their technique when you  
12:07:11 17 visited the LNDD back in 2007?

12:07:14 18 A. That's correct.

12:07:15 19 Q. And was that in connection  
12:07:16 20 with this case?

12:07:17 21 A. It was, yes.

12:07:18 22 Q. So the basis upon which you  
12:07:22 23 are going to describe the manual  
12:07:25 24 processing, those are the -- that is  
12:07:28 25 the kind of function you saw LNDD

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12:07:33 2 technicians perform when you were at  
12:07:35 3 LNDD?

12:07:35 4 A. That's correct, yes.

12:07:36 5 Q. All right. Let's go on to  
12:07:44 6 your demonstration.

12:07:46 7 A. Okay. Would you like me to  
12:07:48 8 just show the general software first.

12:07:50 9 MR. RIVKIN: Can I just ask  
12:07:51 10 one clarifying question. Was the older  
12:07:54 11 version with the OS/2 software used for  
12:07:56 12 both the A sample and the B sample?

12:07:59 13 THE WITNESS: I believe it  
12:08:00 14 was, yes.

12:08:01 15 MR. RIVKIN: Thank you.

12:08:06 16 MR. SUH: A and B of the  
12:08:09 17 995474?

12:08:09 18 MR. RIVKIN: Yes, of Mr.  
12:08:10 19 Landis' sample.

12:08:11 20 A. Okay. So here we have the  
12:08:27 21 basic layout of the software. We have  
12:08:30 22 diagnostics in the upper right-hand  
12:08:32 23 corner which tell you the vacuum  
12:08:34 24 system's working correctly, the  
12:08:35 25 pressure is at a correct level. To the

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12:08:39 2 left we have the signals, the 44, 45  
12:08:43 3 and 46 CO2. And as we're not connected  
12:08:47 4 to the machine you're not seeing  
12:08:50 5 anything at present, but you would have  
12:08:51 6 a red, blue and green bar which would  
12:08:53 7 move backwards and forwards depending  
12:08:55 8 on the signal from the sample or the  
12:08:57 9 intensity from the sample.

12:08:58 10 And down at the bottom we  
12:09:00 11 have what we describe as a mnemonic,  
12:09:03 12 basically it's just the valves which  
12:09:06 13 are used during the standard analysis,  
12:09:08 14 the standard run of the sample. We  
12:09:10 15 have GC where the sample is injected,  
12:09:14 16 the valve which burns off the solvent  
12:09:17 17 or sends the sample through to the  
12:09:18 18 combustion furnace and post-combustion  
12:09:22 19 furnace to the mass spectrometer. I  
12:09:25 20 wouldn't worry too much about G1, S1,  
12:09:30 21 that's under the peripheral which isn't  
12:09:33 22 quite relevant to this system.

12:09:36 23 So what happens during the  
12:09:37 24 analysis, the sample is taken, it's  
12:09:39 25 injected into the mass spectrometer,

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12:09:41 2 into the system, data is acquired and  
12:09:45 3 saved to hard disc. Then under normal  
12:09:47 4 procedures it's simply printed out and  
12:09:51 5 those are the results. You can view  
12:09:53 6 the data if you go to manual DP, this  
12:09:57 7 DP stands for data processing. And  
12:09:59 8 this launches that program I showed you  
12:10:02 9 before.

12:10:02 10 Now I'm going to open a file  
12:10:04 11 which I used in the original hearing,  
12:10:07 12 this is one where Dr. Mark Conrad of  
12:10:19 13 Lawrence Berkeley National Laboratories,  
12:10:13 14 it's simply a random file.

12:10:23 15 THE PRESIDENT: Where is  
12:10:24 16 that?

12:10:25 17 THE WITNESS: In California,  
12:10:26 18 in San Francisco.

12:10:27 19 A. This is the file he sent me.  
12:10:29 20 It's labeled BTEX which is actually a  
12:10:32 21 compound, so I'm guessing it's probably  
12:10:35 22 a BTEX, but it's not really important.

12:10:38 23 It's a mixture of volatile  
12:10:49 24 compounds. There's not much point into  
12:10:53 25 going into any detail on that, it's not



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12:10:55 2 relevant to the case.

12:10:57 3 THE PRESIDENT: This is not  
12:10:58 4 a criticism, but you tend to drop your  
12:11:00 5 voice at the end of the sentence, so  
12:11:02 6 that's why we're having a little  
12:11:04 7 trouble.

12:11:05 8 THE WITNESS: I'm sorry,  
12:11:06 9 I'll try the avoid that.

12:11:07 10 A. So what we have in front of  
12:11:08 11 us is a series of sample peaks which is  
12:11:13 12 what we're talking about in this case,  
12:11:16 13 you see one there, one there, right  
12:11:17 14 across. And then we have some pulses  
12:11:19 15 of CO2 reference gas which are injected  
12:11:22 16 into the machine so that you have an  
12:11:24 17 isotopic ratio for which to measure the  
12:11:27 18 unknown isotopic ratios, the peaks.

12:11:31 19 Q. Dr. Davis, at the risk of  
12:11:35 20 oversimplifying, this is an IRMS  
12:11:37 21 chromatogram?

12:11:38 22 A. This is an IRMS chromatogram  
12:11:40 23 and you can tell very simply if you  
12:11:42 24 zoom in on one peak, you will see three  
12:11:48 25 lines, labeled the major, the minor 1

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12:11:53 2 and the minor 2. Now the major, the  
12:11:56 3 red line is the 44, the minor 1 is the  
12:12:00 4 45, and the minor 2 is the 46. So  
12:12:04 5 those numbers come from the different  
12:12:07 6 masses of CO<sub>2</sub>. So you've got CO<sub>2</sub> has a  
12:12:10 7 mass of 12 and oxygen has a mass of 16  
12:12:12 8 so that gives you your 44, and then you  
12:12:14 9 have the isotopes of carbon and of  
12:12:17 10 oxygen which gives you your 45 and your  
12:12:20 11 46. So that's the reason why we have  
12:12:21 12 those numbers.

12:12:24 13 Q. Those are the ions from the  
12:12:26 14 instrument after ionization and --

12:12:28 15 A. Those are the molecular  
12:12:30 16 ions.

12:12:31 17 Q. These are the ions that come  
12:12:43 18 out of the mass spectrometer, they hit  
12:12:49 19 the detector and then they are then  
12:12:53 20 registered on this chromatogram as the  
12:12:58 21 mass 44, 45 and 46 ion.

12:13:06 22 MR. DUNN: Excuse me, Mr.  
12:13:08 23 Williams, I'm sorry to interrupt. Just  
12:13:10 24 one minor administrative matters, we  
12:13:12 25 were told we weren't able to get any

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12:13:14 2 sort of permanent record of what's  
12:13:16 3 being showed today and that's fine, but  
12:13:18 4 we notice Dr. Keith Goodman down at the  
12:13:21 5 end of the table taking pictures of  
12:13:23 6 screens as they come up and being able  
12:13:25 7 to preserve something, so we just  
12:13:29 8 wanted to see if there's a way we could  
12:13:31 9 at least get copies of what Dr. Goodman  
12:13:33 10 is taking pictures of because we have  
12:13:37 11 no way to know or remember what's shown  
12:13:40 12 here because we can't recreate it.

12:13:44 13 MR. SUH: That's fine.

12:13:45 14 THE PRESIDENT: What's fine?  
12:13:47 15 That they should get their cameras out  
12:13:49 16 too, or --

12:13:50 17 MR. SUH: We'll give them  
12:13:51 18 whatever we have.

12:13:54 19 THE PRESIDENT: Thank you  
12:13:55 20 very much. That's fine.

12:13:58 21 A. So if for the moment we  
12:14:01 22 ignore the green line, the micro 46,  
12:14:06 23 this is the oxygen which is not  
12:14:08 24 relevant in any analysis in this case,  
12:14:10 25 if you just concentrate on the 45 and

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12:14:11 2 44, the major and the minor 1, you can  
12:14:14 3 see that what the software does is it  
12:14:17 4 plots a ratio, I'll just link the X  
12:14:23 5 axis here, it plots a ratio of the peak  
12:14:26 6 at the top of the 44, the 45 divided by  
12:14:30 7 the 41. And the bottom you have the  
12:14:32 8 chromatogram, and it's the value of  
12:14:34 9 these ratios which is the important  
12:14:36 10 thing which we look at in these  
12:14:38 11 instruments.

12:14:38 12 Q. Dr. Davis, again, I'm going  
12:14:40 13 to just take this one piece by piece so  
12:14:43 14 that we can make sure we're clear. The  
12:14:45 15 bottom figure of course is that same  
12:14:47 16 chromatogram we had up first, right?

12:14:50 17 A. Yes, same data.

12:14:51 18 Q. And those are the kinds of  
12:14:52 19 chromatograms that we see in the doc  
12:14:55 20 pack and elsewhere that are used to  
12:14:57 21 calculate the -- which represent,  
12:14:59 22 excuse me, the isotopic values of the  
12:15:02 23 target piece?

12:15:02 24 A. Yes, it's probably a little  
12:15:04 25 cleaner than the urine samples, but

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12:15:07 2 fundamentally, yes.

12:15:08 3 Q. Aside from the cleanup issue  
12:15:10 4 and the quality of the chromatography,  
12:15:13 5 this is the same equivalent picture?

12:15:16 6 A. Yes, it is.

12:15:17 7 Q. The piece on the top in the  
12:15:21 8 bottom right-hand corner that says two  
12:15:24 9 over one, is this the two over one  
12:15:26 10 trace referred to in all of the  
12:15:28 11 declarations and reply declarations?

12:15:29 12 A. It is, yes.

12:15:30 13 Q. All right.

12:15:31 14 A. So when we carry out an  
12:15:36 15 analysis, a determination, we get to  
12:15:38 16 this stage and a determination has to  
12:15:40 17 be made is the chromatography  
12:15:42 18 sufficiently good that we can accept  
12:15:44 19 these results or has something during  
12:15:46 20 the analysis gone wrong, in preparation  
12:15:49 21 of the analysis, preparation of the  
12:15:50 22 sample, the functionality of the  
12:15:52 23 equipment, has something happened which  
12:15:54 24 means that we are not able to  
12:15:59 25 automatically determine the peak and

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12:16:01 2 peak -- I think if I go back one point,  
12:16:04 3 I've jumped ahead of myself slightly  
12:16:06 4 there.

12:16:06 5 When a chromatogram like  
12:16:10 6 this is produced with the ratios, what  
12:16:11 7 the software then does is determine the  
12:16:14 8 start and the end of the peaks and  
12:16:17 9 measures the areas inside the peaks to  
12:16:19 10 gives us the ratio. This is not simply  
12:16:21 11 a plot. So if I click on here you'll  
12:16:26 12 see the software brings up the isotopic  
12:16:33 13 ratio of the peaks, so we'll hone in  
12:16:35 14 here. What you see is the software has  
12:16:40 15 dropped a couple of red lines, thick  
12:16:43 16 dots and thin dots down to the bottom  
12:16:45 17 of the graph. What these represent are  
12:16:48 18 the start and end of the peaks as  
12:16:50 19 determined by rather complex algorithm,  
12:16:55 20 and then we see a red across the top  
12:16:58 21 which is what we refer to as the apex  
12:17:00 22 of the peak or the top of the peak, the  
12:17:02 23 highest points, and we have to the  
12:17:04 24 right of that in black lettering an  
12:17:07 25 isotopic number which this case minus

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12:17:11 2 25.7 by minus 25.93. Within standard  
12:17:16 3 natural ranges.

12:17:16 4 So now at this point, what  
12:17:21 5 happens or what happened at LNDD is the  
12:17:26 6 operatives had to make a decision and  
12:17:29 7 they had to make a decision whether the  
12:17:32 8 chromatography was sufficiently good  
12:17:35 9 that the computer was able to correctly  
12:17:38 10 identify the start and the end of the  
12:17:41 11 peak. And that is now a matter of  
12:17:43 12 record that on I believe it was all the  
12:17:46 13 samples the decision was made  
12:17:51 14 chromatography was not sufficiently  
12:17:52 15 good to allow the software to determine  
12:17:55 16 the start and end of the peak  
12:17:57 17 independently.

12:17:58 18 Now, whilst I was there  
12:18:02 19 viewing this analysis I did ask what  
12:18:06 20 objective criteria was used to  
12:18:08 21 determine whether the chromatography  
12:18:11 22 was sufficient or insufficient to rely  
12:18:14 23 on the embedded automatic algorithms.  
12:18:17 24 To this date, I and nobody else on Mr.  
12:18:22 25 Landis' team have ever received an

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12:18:23 2 answer to that. The only answer we've  
12:18:25 3 ever had is that we used our  
12:18:28 4 experience. And in this sort of very  
12:18:31 5 mathematical, very clinical, and this  
12:18:33 6 is almost clinical analysis, that's  
12:18:35 7 something which I am extremely  
12:18:40 8 concerned about, something which I've  
12:18:41 9 really not seen done before. You need  
12:18:43 10 an objective set of rules in order to  
12:18:45 11 determine an action and in this case,  
12:18:47 12 those do not -- those do not exist.

12:18:50 13 Now --

12:18:51 14 MR. DUNN: Excuse me, I  
12:18:52 15 apologize for interrupting, but we now  
12:18:55 16 notice Dr. Goodman is not taking  
12:18:57 17 pictures, so I think we need to get our  
12:18:59 18 cameras out, is that okay?

12:19:01 19 THE PRESIDENT: Yes. We'll  
12:19:03 20 wait until you've organized.

12:19:11 21 MR. SUH: We'll have Dr.  
12:19:13 22 Goodman continue to take pictures and  
12:19:14 23 we'll share them.

12:19:15 24 MR. DUNN: Would you so  
12:19:16 25 instruct him so we don't have to take



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12:19:18 2 two lots of pictures.

12:19:20 3 MR. SUH: Dr. Goodman, can  
12:19:22 4 you continue to take pictures all  
12:19:23 5 through the course of this.

12:19:25 6 DR. GOODMAN: I did already  
12:19:26 7 take a photo of this. Nothing has  
12:19:29 8 changed. That's why I'm not taking  
12:19:31 9 photos.

12:19:33 10 MR. SUH: Thank you.

12:19:41 11 A. Okay. So as I was saying,  
12:19:45 12 in all of Mr. Landis' samples it was  
12:19:48 13 decided that chromatography was poor,  
12:19:52 14 poor to the extent that they could not  
12:19:55 15 integrate samples using the embedded  
12:19:58 16 algorithms. So therefore, they made a  
12:20:01 17 decision to do manual integration.  
12:20:04 18 Now, as we've heard from Dr. Brenna, he  
12:20:06 19 considers this a quality control issue.  
12:20:10 20 And I actually would tend to agree with  
12:20:12 21 him. This is a quality control.  
12:20:13 22 Because you can move the start and end  
12:20:15 23 of the peaks, see what effect that has  
12:20:17 24 on the isotopic numbers and if there's  
12:20:20 25 a little blip or lump, you can move it

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12:20:23 2 onto the lump, away from the lump and  
12:20:25 3 see if this is having a significant  
12:20:30 4 effect.

12:20:30 5 If you can pull up the  
12:20:32 6 IsoPrime manual, Page 227 of the Adobe  
12:20:48 7 Acrobat file.

12:21:00 8 Q. While they're looking for  
12:21:02 9 the manual, let me ask you some  
12:21:04 10 background questions. Now, Dr. Davis,  
12:21:08 11 can you explain to the panel what your  
12:21:10 12 background is in relation to this  
12:21:13 13 IsoPrime instrument and the OS/2  
12:21:17 14 software used here?

12:21:19 15 THE PRESIDENT: That's in  
12:21:19 16 the brief at some length, isn't it, so  
12:21:21 17 we don't have to say it all again.

12:21:25 18 MR. YOUNG: This is a  
12:21:26 19 demonstration, not a direct is my  
12:21:28 20 understanding?

12:21:29 21 THE PRESIDENT: Correct,  
12:21:30 22 correct.

12:21:50 23 A. Is there any way of zooming  
12:21:53 24 in at the top? Thank you. So as we  
12:22:02 25 see, the very first paragraph, the

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12:22:05 2 description of what the manual data  
12:22:07 3 processing is for -- do you want to go  
12:22:09 4 back a page and if you confirm this is  
12:22:11 5 under the title of manual data  
12:22:13 6 processing and not something else. Go  
12:22:15 7 to the previous page. So we see the  
12:22:28 8 title is introduction to manual data  
12:22:30 9 processing.

12:22:30 10 So again, if you can enlarge  
12:22:35 11 the top section. "The purpose of the  
12:22:39 12 data processing facility is to allow  
12:22:41 13 the user to access, manipulate and  
12:22:44 14 generally study in close detail all  
12:22:46 15 aspects of the data acquisition.  
12:22:48 16 Timing aspects of most of the  
12:22:49 17 parameters can be altered, and the data  
12:22:51 18 reanalyzed to see what effect this has  
12:22:53 19 on the results."

12:22:55 20 Now, that is exactly what  
12:22:56 21 I've described. If you have an  
12:22:58 22 aberration in your chromatography, this  
12:23:00 23 facility allows you to see what effect  
12:23:02 24 that abrasion has. Now, if you go to  
12:23:05 25 the next page in the manual. Zooming

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12:23:08 2 on the top again. If we read the  
12:23:17 3 second paragraph, "Use this feature of  
12:23:20 4 the software to check any other aspect  
12:23:21 5 of the sample run, e.g. peak to  
12:23:24 6 baseline, peak to zero during the  
12:23:25 7 analysis of the balance, etc. Once the  
12:23:28 8 method file parameter settings required  
12:23:30 9 are found, close out of the DP  
12:23:32 10 software. Make changes in the method  
12:23:34 11 run file and check them out with  
12:23:36 12 another single run." Do another single  
12:23:40 13 run.

12:23:40 14 This is a tool for which you  
12:23:44 15 can correct for problems with  
12:23:47 16 chromatography programs, with  
12:23:49 17 determining when valves open and close,  
12:23:51 18 and then it allows you to fix those  
12:23:53 19 problems within the electronic methods  
12:23:55 20 and then you rerun another sample to  
12:23:57 21 test that that is correct. This is not  
12:23:59 22 a tool that should be used to in some  
12:24:02 23 way try and fudge and correct around  
12:24:06 24 poor chromatography. There's a very  
12:24:10 25 good reason for that, because there's

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12:24:12 2 just no objective way of determining  
12:24:15 3 where the start and end of the peak is  
12:24:17 4 simply by viewing this. And the  
12:24:19 5 different -- if we move some of the  
12:24:22 6 starts and the end of the peaks we can  
12:24:23 7 see some very significant changes in a  
12:24:25 8 number of minus 25.7. We've gone to  
12:24:28 9 minus 27.0.

12:24:35 10 Q. Can you redo what you did.

12:24:39 11 A. Just move the start and end  
12:24:40 12 of the peak. We can move it to  
12:24:42 13 ridiculous positions and we can move it  
12:24:45 14 to get ridiculous numbers. That's a  
12:24:50 15 ridiculous position for the start of  
12:24:52 16 the peak. But the problem is that at  
12:24:54 17 no time did the laboratory staff record  
12:24:56 18 what they did. And this is despite the  
12:24:58 19 facility within the software to make  
12:25:01 20 records of what their actions actually  
12:25:04 21 were.

12:25:10 22 MR. PAULSSON: The final  
12:25:10 23 peak to the right looks like it's  
12:25:12 24 mostly planar, not peak? And that is  
12:25:17 25 the result of the complex algorithm?

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12:25:19 2 THE WITNESS: What happens  
12:25:21 3 is you're only taking, there's a line  
12:25:23 4 that runs across the base here, so  
12:25:25 5 although you have a long tail it  
12:25:27 6 doesn't actually contribute much to the  
12:25:29 7 actual peak. But in reality, all peaks  
12:25:33 8 with good chromatography is far better  
12:25:36 9 to take the tail as much as they can.  
12:25:37 10 So only when you have closely --

12:25:39 11 MR. PAULSSON: Excuse me.  
12:25:41 12 So the reason it's so far out in the  
12:25:44 13 tail is simply that it has -- there has  
12:25:45 14 to be one line between a peak and the  
12:25:48 15 next peak so if they're far apart it  
12:25:51 16 will look that way.

12:25:52 17 THE WITNESS: Exactly. If  
12:25:53 18 it's far apart the integration will be  
12:25:55 19 more accurate. If they're close  
12:25:57 20 together as they are in this triplet  
12:25:59 21 here it forces the lines to move  
12:26:00 22 together and the integration becomes  
12:26:03 23 far less accurate. So what is trying  
12:26:04 24 to be done with this manual integration  
12:26:07 25 is to correct for poor chromatography.

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12:26:10 2 Unfortunately, when you have poor  
12:26:12 3 chromatography, once you have it that's  
12:26:14 4 it, there's nothing you can do to fix  
12:26:15 5 it. The only thing you can do to fix  
12:26:17 6 it is to work out what's gone wrong,  
12:26:20 7 change the settings and rerun the  
12:26:21 8 analysis in order good chromatography  
12:26:27 9 occurs.

12:26:27 10 A lot has been said about  
12:26:29 11 using the isotopic ratios as a tool to  
12:26:33 12 determine where the peak starts and  
12:26:35 13 peak ends actually occur.

12:26:37 14 Q. Dr. Davis, before you go on  
12:26:40 15 to the two over one trace, can you  
12:26:42 16 demonstrate to the panel how when you  
12:26:44 17 move -- a few more examples of how when  
12:26:46 18 you move this, the start of the peak  
12:26:53 19 and the end of the peak that it will  
12:26:56 20 change isotopic value. Let's use some  
12:27:00 21 that are not dramatic, in other words,  
12:27:04 22 putting the point right in the middle.

12:27:07 23 A. So you can get minor  
12:27:10 24 changes.

12:27:12 25 Q. And why don't you read out

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12:27:13 2 the numbers as they change.

12:27:14 3 A. It changed by about .2, .1,

12:27:23 4 about one and a half per mil. I mean

12:27:26 5 the numbers are pretty variable. The

12:27:27 6 problem is it will depend, depend

12:27:30 7 totally on the peaks, the size of the

12:27:31 8 peaks, the relationship of the peaks

12:27:33 9 and this is why it's such a bad method

12:27:35 10 of actually trying to determine what

12:27:37 11 the actual isotopic values are. This

12:27:41 12 is a tool that was never designed to do

12:27:42 13 that.

12:27:43 14 Q. Is this a tool -- let's take

12:27:46 15 these one at a time because I don't

12:27:47 16 want to click through it so quickly

12:27:49 17 that the panel doesn't see them. First

12:27:51 18 of all, does the amount the values

12:27:54 19 change in an actual sample depend upon

12:27:57 20 the quality of the chromatography?

12:27:59 21 A. Absolutely, yes.

12:28:00 22 Q. Can you explain why?

12:28:01 23 A. Because if you have peaks

12:28:05 24 close together you have peaks merging

12:28:09 25 into one another and therefore



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12:28:11 2 determining where one peak starts and  
12:28:13 3 the other peak ends becomes very  
12:28:16 4 difficult and you have contribution  
12:28:18 5 from different compounds.

12:28:18 6 Q. Why, why is that?

12:28:20 7 A. Because the chromatography  
12:28:21 8 is poor. Because the chromatography is  
12:28:23 9 not able to separate the different  
12:28:26 10 compounds. The run needs to be done at  
12:28:29 11 a cooler temperature, at a slower flow  
12:28:32 12 rate. There's a whole range of  
12:28:34 13 different parameters which you actually  
12:28:35 14 change to improve chromatography. It's  
12:28:37 15 a standard part of chromatographic  
12:28:39 16 science. You run a sample, you see  
12:28:42 17 whether they're separated properly, if  
12:28:45 18 it's not, you change the parameters,  
12:28:46 19 you do it again until it is correct.

12:28:48 20 MR. RIVKIN: I'm sorry, it  
12:28:49 21 would help me understanding this if you  
12:28:51 22 could point me to the actual  
12:28:53 23 chromatographs, not on here, but the  
12:28:59 24 ones that were actually used in the A  
12:29:01 25 sample so I can see. Because I

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12:29:04 2 understand obviously if you move the  
12:29:05 3 line substantially it will change the  
12:29:07 4 numbers, but in each case when Dr.  
12:29:10 5 Davis moved the line he moved it pretty  
12:29:12 6 clearly to where it was not the  
12:29:15 7 beginning or the end. So it would help  
12:29:19 8 to see where the lab believed the  
12:29:22 9 beginning and the end of those peaks  
12:29:24 10 were.

12:29:24 11 THE WITNESS: I actually  
12:29:26 12 can't do that because they weren't  
12:29:27 13 recorded. That's the problem.

12:29:30 14 MR. RIVKIN: Can you just  
12:29:31 15 point me to where the -- okay, that's  
12:29:34 16 helpful to know. If you could just  
12:29:37 17 point me to the page reference so I can  
12:29:40 18 have that in front of me while he's  
12:29:41 19 doing his demonstration, that would be  
12:29:43 20 helpful to me.

12:29:44 21 MR. SUH: Sample A F3 and  
12:29:47 22 sample B F3 cites, we'll get those. I  
12:29:50 23 mean but, Mr. Rivkin --

12:29:52 24 MR. RIVKIN: Keep going with  
12:29:53 25 the demonstration, but that will help

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12:29:55 2 me.

12:29:56 3 A. I can keep --

12:30:16 4 Q. Again, in response to Mr.

12:30:18 5 Rivkin's comment about moving it pretty

12:30:22 6 clearly where the peak starts and

12:30:26 7 stops.

12:30:27 8 A. Unfortunately, one of the

12:30:28 9 problems with this particular sample is

12:30:30 10 the chromatography is actually not that

12:30:32 11 bad. So the automated algorithms has

12:30:38 12 done a correct job and it is pretty

12:30:39 13 much where it should be.

12:30:40 14 Q. And why is that different

12:30:41 15 than the situation we have in our case?

12:30:45 16 We have the cites now. It's USADA 173.

12:30:49 17 MR. WEISS: Which is Exhibit

12:30:51 18 24.

12:30:57 19 MR. RIVKIN: I've got it,

12:30:58 20 thank you.

12:30:58 21 MR. SUH: I think that's

12:31:00 22 sample A. And sample B F3 is USADA

12:31:10 23 346.

12:31:12 24 MR. WEISS: Exhibit 25.

12:31:13 25 MR. SUH: Exhibit 25.

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12:31:18 2 MR. RIVKIN: Now looking at  
12:31:20 3 Page 173 and there do appear to be  
12:31:22 4 lines going down which show where the  
12:31:26 5 peaks begin and end, now they're all so  
12:31:29 6 close it may not be possible to judge.

12:31:48 7 THE WITNESS: That's  
12:31:48 8 correct.

12:31:53 9 Q. This is F3.

12:32:16 10 A. Yes, those actually are, I  
12:32:17 11 apologize, those actually are the start  
12:32:19 12 and end of the peaks. As you'll see,  
12:32:24 13 it's very difficult to see exactly  
12:32:26 14 where they are.

12:32:28 15 MR. RIVKIN: It is. Thank  
12:32:28 16 you.

12:32:29 17 MR. PAULSSON: You said,  
12:32:30 18 Dr. Davis, that if the chromatography  
12:32:32 19 is really bad you keep working on it  
12:32:34 20 until you get it right, something like  
12:32:36 21 that.

12:32:36 22 THE WITNESS: Correct, yes.

12:32:38 23 MR. PAULSSON: If it's  
12:32:39 24 really bad, don't you have to give up?

12:32:41 25 THE WITNESS: Not at all,

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12:32:42 2 no. I think we have some examples of  
12:32:45 3 chromatography of LNDD and UCLA showing  
12:32:47 4 the difference in how it can be done.  
12:32:51 5 If the chromatography is poor on one  
12:32:53 6 run, what you can simply do to increase  
12:32:56 7 the separation is you call the up and  
12:32:58 8 down. The GC is a hot oven with a that  
12:33:02 9 column. Now the hotter, the faster you  
12:33:04 10 run the temperatures up the closer the  
12:33:06 11 peaks come together and the poorer the  
12:33:07 12 chromatography becomes. If you have  
12:33:09 13 lots of peaks they're eluting very  
12:33:12 14 close together, what you do is you cool  
12:33:13 15 the often down, you might change the  
12:33:16 16 flow rates. You separate everything  
12:33:18 17 out.

12:33:19 18 So absolutely you can  
12:33:20 19 improve the chromatography or you can  
12:33:22 20 go back and improve the actual wet  
12:33:24 21 chemistry, the cleanup process before  
12:33:26 22 you actually inject the sample into the  
12:33:28 23 actual GC.

12:33:32 24 MR. PAULSSON: So you start  
12:33:33 25 over?

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12:33:33 2 THE WITNESS: You can do one  
12:33:34 3 of two things. You can change the  
12:33:36 4 instrument settings or you could  
12:33:38 5 actually do another extraction.

12:33:41 6 Q. Again, going back to the  
12:33:43 7 manual, does the manual allow you to  
12:33:45 8 simply reprocess the peaks for bad  
12:33:47 9 chromatography and run on the same  
12:33:50 10 sample?

12:33:51 11 A. No. It tells you to run  
12:33:54 12 another sample, change the  
12:33:55 13 chromatography and run another sample.  
12:34:00 14 Now, there's been some discussion about  
12:34:03 15 using the ratios to help you determine  
12:34:06 16 where the start and the end of the  
12:34:07 17 peaks are.

12:34:08 18 Q. And the ratios, you mean the  
12:34:09 19 two over one trace?

12:34:10 20 A. The blue trace at the top  
12:34:12 21 here where we see all these little  
12:34:21 22 squiggle. Now a good way to describe  
12:34:24 23 this squiggle would be from Janine's  
12:34:26 24 testimony, the second page of her  
12:34:29 25 testimony. Can we pull that up.

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12:34:43 2 Q. Dr. Davis, this is the two  
12:34:44 3 over one trace that correlates to the  
12:34:47 4 chromatogram directly below it, right?

12:34:49 5 A. That's correct, yes. That  
12:34:50 6 peak, yes.

12:34:50 7 Q. And why is there a peak that  
12:34:53 8 sticks up and a peak that sticks down?

12:34:56 9 A. If we pull up Janine's  
12:34:57 10 diagram I can explain. Okay, so what  
12:35:25 11 Janine is showing here is the way the  
12:35:27 12 different isotopes or isotopomers elute  
12:35:31 13 from the GC. Because the GC is very  
12:35:34 14 good separating things. Not only will  
12:35:36 15 it separate different steroids or  
12:35:38 16 different compounds, it also has a very  
12:35:40 17 slight effect of separating some of the  
12:35:42 18 isotopes itself. So what happens is  
12:35:45 19 the 44 peak comes out slightly before  
12:35:50 20 -- sorry, the 45 peak comes out  
12:35:53 21 slightly before the 44 peak and if you  
12:35:55 22 pull a ratio of that you see this  
12:35:58 23 upward and downward swoop.

12:36:01 24 Now, to get good isotopic  
12:36:05 25 numbers all software corrects this.

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12:36:07 2 They take the apex of the 45 and the  
12:36:10 3 apex of the 44 and they move them  
12:36:12 4 together post-acquisition and do the  
12:36:14 5 correction. So what we're seeing on  
12:36:18 6 the screen, if you can flip back to the  
12:36:22 7 OS/2 screen if that's okay. So what  
12:36:29 8 we're seeing on the screen in the OS/2  
12:36:31 9 trace is an uncorrected ratio. There  
12:36:34 10 is a bias and a fault in that ratio.  
12:36:38 11 And if you use this to determine start  
12:36:39 12 and end of peak, you will always bias  
12:36:42 13 peak start left and the peak end left.  
12:36:46 14 There's an in-built error in this  
12:36:49 15 process. And the ratio is not designed  
12:36:51 16 to do this.

12:36:52 17 So saying that you're  
12:36:53 18 looking closely at ratios, and again,  
12:36:56 19 it's something which is not in the  
12:36:58 20 manual, it's -- I've not seen it  
12:37:00 21 published, this is -- this is a  
12:37:02 22 technique that somehow developed in the  
12:37:04 23 laboratory and it simply isn't valid.

12:37:08 24 MR. RIVKIN: Sorry, explain  
12:37:10 25 again why it creates a left-ward bias.



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12:37:14 2 A. Can we go back to Janine's  
12:37:17 3 diagram, please.

12:37:18 4 MR. RIVKIN: I saw the first  
12:37:20 5 peak is to the left and the right. But  
12:37:22 6 I didn't understand looking at the  
12:37:23 7 other chart.

12:37:26 8 A. Go back to the OS/2. I do  
12:37:28 9 apologize.

12:37:36 10 Q. Dr. Davis, why don't you  
12:37:38 11 draw it. If you can draw it they can  
12:37:40 12 put it on the projector.

12:37:51 13 A. As I've just explained, what  
12:37:54 14 happens during analysis is the 45 peak,  
12:38:01 15 this is highly exaggerated, comes out  
12:38:07 16 before the 44 peak. Now what the  
12:38:11 17 software is doing the OS/2 software  
12:38:15 18 I've just shown you is taken a point-  
12:38:18 19 for-point plot in real time. It's  
12:38:20 20 making no corrections. It's plotting  
12:38:22 21 this point, this point, this point,  
12:38:24 22 this point and then we get the 45 come  
12:38:26 23 in. So it goes up. Then we get the 44  
12:38:29 24 starting to merge. So it goes down.  
12:38:32 25 And then we see 45 disappearing again,

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12:38:35 2 comes up and goes back out like that.  
12:38:38 3 So what you're seeing, you're trying to  
12:38:41 4 determine the center of the peak by  
12:38:43 5 using two different peaks which  
12:38:47 6 actually aren't coincidental. And  
12:38:49 7 that's the method which they're using  
12:38:51 8 to determine the start and end of the  
12:38:53 9 peaks.

12:38:55 10 Now, there is some use,  
12:38:57 11 diagnostic use for two over one ratio.  
12:38:59 12 It's very useful when you're looking  
12:39:01 13 for combustion tubes running to the end  
12:39:03 14 of their life, you see your 46 doing  
12:39:06 15 strange things. There are some useful  
12:39:08 16 diagnostic tools. But to determine the  
12:39:10 17 start and end of the peak is not one of  
12:39:12 18 them. It's not designed for that.

12:39:14 19 I think simple argument for  
12:39:17 20 that is the software algorithm which is  
12:39:20 21 used in this uses the peak, the peak  
12:39:24 22 traces determine start and end of the  
12:39:25 23 ratio. If it was better to do the  
12:39:27 24 ratios, so I'll say it again, the  
12:39:29 25 software uses the peak start end to

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12:39:34 2 determine the start -- uses the actual  
12:39:36 3 raw data, the peaks to determine start  
12:39:38 4 and end of the peaks. If it was better  
12:39:39 5 to use the ratio to do that the  
12:39:41 6 software would do that. It doesn't.  
12:39:43 7 It uses the peak, the beam intensity of  
12:39:46 8 the peaks, not the ratio.

12:39:59 9 Now, there is also another  
12:40:00 10 element of this and I shall not go into  
12:40:03 11 it in too much detail because I've only  
12:40:05 12 demonstrated the other one. But there  
12:40:07 13 is a background two over one, which is  
12:40:09 14 the pink line going through the ratio.  
12:40:11 15 Exactly the same thing is done with  
12:40:13 16 this trace where it is manually altered  
12:40:15 17 in order for the laboratory staff to  
12:40:16 18 get what they think is right. Again,  
12:40:18 19 with no objective reason for doing it,  
12:40:21 20 no objective criteria or modus operandi  
12:40:24 21 for moving, adding, deleting points.  
12:40:27 22 It might appear very obvious, but it  
12:40:29 23 really isn't. And if we're getting  
12:40:31 24 down to some of the finer points of a  
12:40:33 25 dirty chromatogram it can cause

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12:40:35 2 horrendous problems.

12:40:36 3 And in the SOP for the  
12:40:37 4 laboratory itself I believe, I can't  
12:40:40 5 remember the exact phrase, I think it  
12:40:41 6 said -- I think I said in the last  
12:40:43 7 hearing that small changes can have a  
12:40:46 8 significant effect. I think it wasn't  
12:40:47 9 quite translated right, correctly, but  
12:40:49 10 that was basically what was the gist of  
12:40:51 11 the SOP.

12:40:52 12 I think that's pretty much  
12:40:59 13 it.

12:41:08 14 THE PRESIDENT: Does that  
12:41:08 15 conclude the demonstration?

12:41:10 16 MR. SUH: Yes, it does.

12:41:11 17 THE PRESIDENT: Thank you.

12:41:20 18 Mr. Young.

12:41:41 19 CROSS EXAMINATION

12:41:41 20 BY MR. YOUNG:

12:41:54 21 Q. Dr. Davis, I'm going to be  
12:41:55 22 fairly brief. You've testified for  
12:42:01 23 athletes in doping cases before?

12:42:04 24 A. I have, yes.

12:42:05 25 Q. But never involving IRMS?

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12:42:13 2 A. I have three cases all  
12:42:14 3 ongoing at present -- which are ongoing  
12:42:20 4 at present two of which are -- sorry,  
12:42:22 5 one's been decided. Two -- I'll say it  
12:42:25 6 again. I have two ongoing cases, both  
12:42:27 7 of which are being heard by CAS.

12:42:36 8 THE PRESIDENT: I'm not  
12:42:36 9 quite sure I understand the answer. Do  
12:42:39 10 those cases involve IRMS?

12:42:41 11 THE WITNESS: They do, yes.

12:42:43 12 Q. And your prior cases  
12:42:46 13 involving athletes didn't involve IRMS?

12:42:51 14 A. Two cases did involve IRMS,  
12:42:54 15 yes.

12:42:54 16 Q. Did?

12:42:54 17 A. Yes, yes. Yes, Mr. Bradley  
12:43:00 18 Burros and Mr. Adam Travis and that was  
12:43:03 19 also on the UK sport website, I believe  
12:43:05 20 my name is attached to it.

12:43:07 21 Q. How many cases have you been  
12:43:08 22 an expert testifying for athletes?

12:43:10 23 A. Several. I'm not quite sure  
12:43:13 24 exactly off the top of my head.

12:43:19 25 THE PRESIDENT: Do the two

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12:43:21 2 include this case, or is this --

12:43:23 3 THE WITNESS: No, it

12:43:24 4 doesn't. It's above and beyond this

12:43:25 5 case.

12:43:36 6 MR. YOUNG: Can you pull up

12:43:37 7 GDC 1369.

12:43:45 8 Q. That's your resume, correct?

12:43:46 9 A. That's correct, yes.

12:43:48 10 Q. Could we go to the second

12:43:50 11 page of that. I'd like to focus on the

12:43:57 12 top paragraph. So you went to work for

12:44:13 13 Micromass for about 14 months between

12:44:16 14 May of '97 and July of '98?

12:44:19 15 A. That sounds about right,

12:44:21 16 yes.

12:44:21 17 Q. And it says that your duties

12:44:24 18 involved both testing and installation

12:44:27 19 of mass spectrometers at customer sites

12:44:31 20 worldwide?

12:44:31 21 A. That's correct.

12:44:32 22 Q. Is that a fair description

12:44:33 23 of what your job duties were?

12:44:34 24 A. Absolutely, yes.

12:44:36 25 Q. It doesn't say anything

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12:44:38 2 there about your building the IsoPrime  
12:44:41 3 instrument, does it?

12:44:42 4 A. That was part of the  
12:44:43 5 building and testing. Let me explain  
12:44:49 6 how the system worked. I'm sure Janine  
12:44:53 7 can give you some explanation as well.  
12:44:56 8 What happened, the test engineer stays  
12:44:58 9 in the factory. The instrument comes  
12:45:01 10 in from the subcontractors, normally in  
12:45:03 11 various states of build. The engineer  
12:45:06 12 then assembles, tests, specs out the  
12:45:10 13 machine, it then ships out on site for  
12:45:13 14 the customer and then it's installed.

12:45:23 15 Q. So somebody else designed  
12:45:24 16 it, the factory built it and you tested  
12:45:27 17 it before it went out?

12:45:28 18 A. That's not unfair.

12:45:31 19 Q. That's unfair?

12:45:32 20 A. Not unfair, sorry, double  
12:45:34 21 negative. I have to say I did actually  
12:45:37 22 physically build the first IsoPrime. I  
12:45:39 23 did actually put it together. That was  
12:45:41 24 part of my job as an engineer.

12:45:46 25 Q. When you would go out in --

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12:45:48 2 well, let me ask. Did you ever go out  
12:45:51 3 to customer sites with the IsoPrime 1?

12:45:56 4 A. I don't think IsoPrime 1 was  
12:45:59 5 ever shipped from the factory. I think  
12:46:00 6 it actually stayed in. The nomenclature  
12:46:02 7 was a little bit awkward because I think  
12:46:04 8 the first IsoPrime that shipped was  
12:46:06 9 IsoPrime 6. I think that actually went  
12:46:09 10 to Berkeley.

12:46:11 11 Q. But we're talking about an  
12:46:13 12 IsoPrime 1 in --

12:46:15 13 A. Sorry, JA -- I apologize.  
12:46:17 14 Yes, I did install a number of those,  
12:46:19 15 yes.

12:46:19 16 Q. And when you did the user  
12:46:21 17 manual that you left was the Isochrom  
12:46:24 18 manual; is that correct?

12:46:25 19 A. I don't believe that at that  
12:46:29 20 time I left any manuals at all. The  
12:46:31 21 first manuals we left was the IsoPrime  
12:46:33 22 manual itself, the IsoPrime EA.

12:46:35 23 Q. You never left the Isochrom  
12:46:38 24 manual?

12:46:38 25 A. To the best of my knowledge.



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12:46:39 2 I might be wrong, but to the best of my  
12:46:41 3 knowledge, no, we didn't, because the  
12:46:43 4 Isochrom of course is a totally  
12:46:45 5 different mass spectrometer.

12:46:46 6 Q. The IsoPrime EA manual  
12:46:48 7 didn't come out until a lot later,  
12:46:51 8 didn't it?

12:46:52 9 A. Absolutely, yes, it came out  
12:46:54 10 a lot later. There were many customers  
12:46:57 11 that actually didn't have manuals.

12:47:04 12 THE PRESIDENT: So what  
12:47:05 13 happened? Did someone train them?

12:47:08 14 THE WITNESS: I would  
12:47:08 15 normally train them after installation  
12:47:10 16 and we did have a series of engineer's  
12:47:12 17 manuals which we provided the customer  
12:47:14 18 with as well. I'm not making excuses  
12:47:16 19 for my employer. It certainly wasn't  
12:47:18 20 the most ideal thing, but...

12:47:25 21 Q. As I look through your  
12:47:29 22 publications, is it a fair summary to  
12:47:38 23 say that you only had two peer-reviewed  
12:47:40 24 articles published?

12:47:41 25 A. I'm afraid that CV is a

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12:47:43 2 little out of date. I have my latest  
12:47:45 3 publication list here. I apologize, I  
12:47:48 4 didn't realize I hadn't updated it.  
12:47:50 5 Have another several publications here.

12:47:53 6 Q. Within the last -- since the  
12:47:55 7 AAA hearing?

12:47:56 8 A. No, these were published  
12:47:58 9 during my time at Queens university.

12:48:05 10 Q. So they were published, the  
12:48:06 11 other --

12:48:07 12 A. I should say the work was done  
12:48:08 13 during my time at Queens university.  
12:48:11 14 Publications sometimes come a little bit  
12:48:13 15 later because it takes time to write up  
12:48:16 16 and get it peer reviewed.

12:48:17 17 Q. So at the time of the first  
12:48:19 18 hearing you'd only had two articles  
12:48:20 19 published?

12:48:21 20 A. No, actually these had been  
12:48:23 21 published as well, I just wasn't aware  
12:48:25 22 they had gone out at that period. We  
12:48:27 23 had been working on them. They had  
12:48:30 24 been submitted. I didn't realize they  
12:48:31 25 had been accepted.

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12:48:32 2 Q. So if you testified that you  
12:48:33 3 only had two articles published at the  
12:48:36 4 time you were wrong?

12:48:37 5 A. I said two were actually in  
12:48:39 6 publication. Others were in press.  
12:48:41 7 It's a moot point, but. I'd hardly  
12:48:48 8 mind if I had less publications.

12:49:00 9 Q. I take it you were not  
12:49:02 10 involved in the development of the OS/2  
12:49:04 11 software?

12:49:05 12 A. Not the original software  
12:49:06 13 that Janine worked on which I believe  
12:49:08 14 is version 1.55 and above, but I did  
12:49:11 15 have some input into the 1.6 software.  
12:49:16 16 I wasn't actually programming it, but I  
12:49:18 17 was, as Janine was doing, writing  
12:49:20 18 specifications for various things.

12:49:23 19 Q. You now have your own IRMS  
12:49:47 20 company?

12:49:47 21 A. It's not entirely mine. I  
12:49:49 22 own 20 percent of the shares.

12:49:50 23 Q. And in your statement you  
12:49:55 24 say that you sold an instrument to the  
12:50:00 25 Anti-Doping, the Portuguese Anti-Doping

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12:50:04 2 administration?

12:50:05 3 A. In Lisbon.

12:50:07 4 Q. In Lisbon, Spain?

12:50:08 5 A. In Lisbon, Portugal.

12:50:10 6 Q. Your statement said Spain?

12:50:12 7 A. I apologize. I apologize.

12:50:14 8 Lisbon, Portugal.

12:50:16 9 Q. Does that instrument have

12:50:17 10 OS/2 software on it?

12:50:19 11 A. No, it didn't.

12:50:37 12 Q. It never had OS/2 software

12:50:39 13 on it?

12:50:40 14 A. It may have done in the

12:50:42 15 testing phase, but certainly doesn't

12:50:44 16 now.

12:50:44 17 Q. Well when you delivered it

12:50:45 18 to them did it have OS/2 software on

12:50:48 19 it?

12:50:48 20 A. I couldn't tell you. I'd

12:50:50 21 have to check, to be quite honest. I

12:50:52 22 don't deliver the machines. I'm not an

12:51:00 23 installation engineer.

12:51:01 24 Q. So did you have anything to

12:51:03 25 do with the design of the instrument?

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12:51:04 2 A. Absolutely, yes.

12:51:05 3 Q. And when you sell it to a  
12:51:10 4 customer you don't know what software  
12:51:13 5 is on it?

12:51:13 6 A. We use our own software, but  
12:51:16 7 there might have been some point or  
12:51:18 8 some stage where OS/2 was used in order  
12:51:20 9 to check or test part of the instrument  
12:51:23 10 functionality during installation of  
12:51:24 11 the program -- of the machine.

12:51:26 12 Q. But it wasn't sent with OS/2  
12:51:28 13 software which was supposed to be the  
12:51:30 14 operating system for the Portuguese  
12:51:33 15 lab?

12:51:33 16 A. No, no.

12:51:35 17 Q. Now, when the LNDD technicians  
12:52:15 18 performed manual integration on these  
12:52:19 19 chromatograms, did that destroy the  
12:52:25 20 original data?

12:52:27 21 A. No, it didn't.

12:52:28 22 Q. And that original data was  
12:52:34 23 what Dr. Botre had in the electronic  
12:52:37 24 data files?

12:52:38 25 A. That's correct, yes.

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12:52:38 2 Q. And you were there with  
12:52:44 3 Dr. Botre when the electronic data  
12:52:47 4 files were reprocessed?

12:52:49 5 A. That's correct.

12:52:50 6 Q. Was Dr. Botre accommodating  
12:52:54 7 to you?

12:52:55 8 A. As I said before, yes.

12:52:56 9 Q. So he was willing to have  
12:53:01 10 the files reprocessed however you  
12:53:05 11 wanted them reprocessed?

12:53:06 12 A. Within the time limits  
12:53:08 13 available, yes.

12:53:09 14 Q. And he was willing, if you  
12:53:10 15 wanted, to blow up chromatograms or two  
12:53:14 16 over one traces if you wanted?

12:53:16 17 A. He was, but I can just add  
12:53:18 18 one point. It's all very well being  
12:53:20 19 able to blow things up and reduce  
12:53:22 20 things, but there was over a million  
12:53:24 21 data points in those files and there  
12:53:26 22 was no way on earth that all required  
12:53:29 23 data could be removed. As we saw when  
12:53:32 24 Janine came round to the offices last  
12:53:33 25 night, she wanted the EDF for obvious

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12:53:37 2 reasons, she wanted the original data.

12:53:39 3 There's no way to really investigate

12:53:41 4 simply from pictures how good or how

12:53:43 5 bad the chromatograms have been

12:53:45 6 integrated.

12:53:46 7 Q. If you'd wanted to have

12:53:49 8 blowups of the chromatograms for the

12:53:53 9 fraction 3 of the A and B samples you

12:53:55 10 certainly could have done that,

12:53:57 11 correct?

12:53:57 12 A. Within time -- within the

12:54:00 13 time constraints I doubt it would be

12:54:01 14 feasible to take every point that would

12:54:03 15 have been needed and every angle and

12:54:06 16 every perspective. It's like I said,

12:54:08 17 it's hundreds of thousands of data

12:54:10 18 points per sample. Sometimes if you're

12:54:12 19 printing out page after page after page

12:54:15 20 you'll miss something and you'll need

12:54:16 21 to go back and it's not always possible

12:54:18 22 to do that.

12:54:18 23 Q. What we've heard is the

12:54:20 24 complaint that the chromatograms in the

12:54:22 25 documentation package are too small.

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12:54:25 2 And you were there with the electronic  
12:54:27 3 data and there are two central  
12:54:30 4 chromatograms in this case?

12:54:31 5 A. You can only blow it up as  
12:54:33 6 large as the paper.

12:54:36 7 MR. PAULSSON: Repeat.

12:54:37 8 A. You can only blow it up as  
12:54:39 9 large as the paper and there are lots  
12:54:41 10 of different perspectives that you  
12:54:42 11 need.

12:54:43 12 Q. How many did you ask for?

12:54:44 13 A. I have no idea.

12:54:48 14 Q. Any?

12:54:49 15 A. Any?

12:54:50 16 Q. Did you ask for any  
12:54:52 17 enlargements or perspectives or blowups  
12:54:55 18 of fractions?

12:54:56 19 A. I'm sure I asked for some.  
12:54:57 20 I don't know how many.

12:54:58 21 Q. And so whatever you asked  
12:54:59 22 for is in the documents that Dr. Botre  
12:55:02 23 included in his report?

12:55:03 24 A. Absolutely, yes.

12:55:05 25 Q. And during that manual



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12:55:18 2 reprocessing, or excuse me, during the  
12:55:20 3 reprocessing of the electronic data  
12:55:24 4 files one of the things that was done  
12:55:26 5 was the technicians manually  
12:55:30 6 reprocessed the data again, right?

12:55:32 7 A. That's correct.

12:55:33 8 Q. And you watched them do  
12:55:39 9 that?

12:55:39 10 A. Yes.

12:55:39 11 Q. And as they were doing that  
12:55:43 12 they were looking at the two over one  
12:55:46 13 trace you've described?

12:55:47 14 A. That's correct.

12:55:48 15 Q. They weren't trying to fudge  
12:55:51 16 the data so that they would get the  
12:55:53 17 correct delta numbers down at the  
12:55:55 18 bottom; is that true?

12:55:56 19 A. I think, as I've testified  
12:55:58 20 before, I don't believe they were  
12:55:59 21 actively trying to get any given  
12:56:02 22 number, but they certainly could see  
12:56:03 23 the numbers on the bottom page, the  
12:56:08 24 actual isotopic numbers are on the  
12:56:12 25 bottom part of the screen, the ratios

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12:56:14 2 have no numbers on them themselves.

12:56:16 3 Q. But what you thought they

12:56:18 4 were doing is genuinely just looking at

12:56:21 5 the baseline and trying to fit the

12:56:24 6 parameters correctly on the two over

12:56:26 7 one trace?

12:56:26 8 A. I think that was their --

12:56:28 9 that's what they thought they were

12:56:30 10 doing. They weren't, but I think

12:56:31 11 that's what they thought they were

12:56:33 12 doing. It's not a valid technique, but

12:56:35 13 I think that's what they thought they

12:56:36 14 were doing.

12:56:39 15 Q. In the hearing before the

12:56:50 16 AAA you had the instrument connected to

12:56:53 17 a computer? Excuse me, to a printer?

12:56:57 18 A. I don't recall.

12:57:00 19 Q. What I remember, and tell me

12:57:04 20 if I'm wrong, is you would set the

12:57:07 21 points and then you would hit a button

12:57:12 22 that either said calculate or analyze

12:57:15 23 data and then the instrument would pop

12:57:19 24 up with numbers?

12:57:19 25 A. Yes. This one here.

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12:57:23 2 MR. SUH: Hold on, let's get  
12:57:25 3 it up so everyone can see it.

12:57:27 4 A. Oh, sorry. This is what  
12:57:29 5 I've been doing all along, yes. We can  
12:57:33 6 do a reanalysis or a full analysis, we  
12:57:36 7 do that and it will come up with the  
12:57:38 8 numbers. It will show on the bottom  
12:57:42 9 down here. I think I just crashed the  
12:58:03 10 software. Yes, what it's trying to do  
12:58:09 11 is send those results to the spooler,  
12:58:11 12 but those isotopic numbers actually on  
12:58:14 13 the top of the peaks were the values  
12:58:15 14 that would be sent to the printer. The  
12:58:19 15 spooler is not set up.

12:58:20 16 Q. But what happens is without  
12:58:22 17 a printer the software crashes?

12:58:24 18 A. It doesn't crash, it hangs.  
12:58:25 19 If we were to sit here and wait for  
12:58:28 20 sufficient time it would come up with  
12:58:29 21 the numbers.

12:58:30 22 Q. Why is it that you didn't  
12:58:40 23 bring the printer this time when you  
12:58:43 24 did last time?

12:58:44 25 A. I don't think we did bring a

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12:58:46 2 printer last time. I think it just  
12:58:47 3 happened to be there. I didn't even  
12:58:49 4 set the computer up. So somebody else  
12:58:51 5 did it for me, so...

12:59:04 6 Q. In the electronic data files  
12:59:06 7 that -- let me step back. Dr. Botre  
12:59:15 8 had the electronic data files on CDs,  
12:59:19 9 correct?

12:59:19 10 A. They were transferred for  
12:59:21 11 him, yes.

12:59:22 12 Q. And included in those  
12:59:25 13 electronic data files were the original  
12:59:31 14 data for the three Mix Cal IRMS runs  
12:59:40 15 for the A and B sample, am I correct on  
12:59:44 16 that?

12:59:44 17 A. Well, it's a little  
12:59:45 18 difficult to tell because the actual  
12:59:47 19 time stamps have been destroyed by the  
12:59:48 20 process of copying it. Just to  
12:59:51 21 clarify, when we were given permission  
12:59:54 22 to actually go in and see the data on  
12:59:56 23 the computer the day before we arrived  
12:59:58 24 the laboratory removed the hard drive  
13:00:00 25 of the computer and I believe they

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13:00:02 2 erased it. But they certainly took the  
13:00:05 3 data off it. So the time stamps  
13:00:07 4 relating to the files relating to the  
13:00:10 5 date it was copied, not the date it was  
13:00:12 6 created. So we don't have much idea as  
13:00:14 7 to what date it was created.

13:00:18 8 Q. Assuming that the electronic  
13:00:19 9 data files which Dr. Botre had were  
13:00:23 10 authentic, which was his opinion,  
13:00:25 11 correct?

13:00:26 12 A. Yes.

13:00:26 13 Q. Then those electronic data  
13:00:33 14 files contained the raw data for the  
13:00:36 15 Mix Cal IRMS?

13:00:37 16 A. They did, yes.

13:00:56 17 Q. In your witness statement  
13:00:58 18 you incorporated -- you adopted by  
13:01:01 19 reference Dr. Goodman's witness  
13:01:03 20 statement; is that right?

13:01:04 21 A. That's correct.

13:01:08 22 MR. YOUNG: Could you bring  
13:01:09 23 up paragraph 138 of Dr. Goodman's  
13:01:11 24 statement. It's on Page 53. And look  
13:01:24 25 down at 138.

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13:01:31 2 Q. "For sample A, the results  
13:01:33 3 of the Mix Cal IRMS," the second of the  
13:01:38 4 Mix Cal IRMS "do not match the results  
13:01:43 5 on the batch data processing results."

13:01:46 6 A. That's correct.

13:01:46 7 Q. And then there's a sentence  
13:01:48 8 about what the original value was, and  
13:01:52 9 what the value was after it was  
13:01:54 10 reprocessed. And then Dr. Goodman says  
13:01:56 11 "The original values of the other  
13:01:58 12 alkanes," and that's the Mix Cal IRMS,  
13:02:02 13 correct?

13:02:03 14 A. Correct, yes.

13:02:03 15 Q. "Are lost forever as LNDD  
13:02:09 16 destroyed those records." That's not  
13:02:11 17 true, is it?

13:02:11 18 A. I think he's trying to say  
13:02:13 19 there's no way of reproducing the  
13:02:15 20 analysis that was done because the --

13:02:16 21 Q. No, it's talking about the  
13:02:18 22 original values. These are the values  
13:02:20 23 that are in the electronic data files  
13:02:24 24 because he talks about --

13:02:25 25 A. No, I think what he's trying

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13:02:26 2 -- what he's trying to say is he's not  
13:02:29 3 talking about the actual DAT file, the  
13:02:32 4 raw data, he's talking about the  
13:02:33 5 integration parameters used in order to  
13:02:35 6 create that number. If you start  
13:02:37 7 messing around with the integration  
13:02:39 8 parameters and you're doing things, no  
13:02:41 9 record was kept, there's no way of  
13:02:43 10 reproducing what was actually performed  
13:02:44 11 by the operator.

13:02:45 12 Q. Let me ask you to look at  
13:02:47 13 the sentence before. "The original  
13:02:51 14 isotopic value of methyldeconate in  
13:02:57 15 this sample was 32.22." So he's  
13:03:01 16 talking about the original isotopic  
13:03:03 17 value?

13:03:03 18 A. Correct.

13:03:04 19 Q. Another sentence later he's  
13:03:06 20 talking about the "Original values of  
13:03:09 21 the other three alkanes are lost  
13:03:11 22 forever.

13:03:14 23 MR. SUH: I think it would  
13:03:16 24 clarify these if you could bring up the  
13:03:18 25 exhibits and show Dr. Davis the

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13:03:21 2 exhibits at issue here. I request if  
13:03:23 3 he's going to be cross examined on them  
13:03:26 4 he be shown those. Dr. Davis, why  
13:03:28 5 don't you take an opportunity to review  
13:03:29 6 those exhibits when they bring them up.

13:03:32 7 MR. YOUNG: Sure.

13:03:33 8 Q. So I can have you take a  
13:03:34 9 look at, for example, USADA 357. If  
13:03:41 10 you could put that side by side that  
13:03:44 11 would be wonderful.

13:03:48 12 MR. RIVKIN: While those are  
13:03:49 13 getting pulled up I have a quick  
13:03:51 14 question. I may have a question about  
13:03:52 15 the OS/2 software when you're done with  
13:03:54 16 the cross examination. I don't know,  
13:03:55 17 it looks like, I don't know if that's  
13:03:57 18 been taken down and whether it takes a  
13:03:59 19 few minutes to reboot.

13:04:00 20 THE WITNESS: It's back up.

13:04:01 21 MR. RIVKIN: It's back up.  
13:04:03 22 So we can look at it later. Thank you.

13:04:10 23 Q. So these are Mix Cal IRMS  
13:04:13 24 results and --

13:04:15 25 A. Can you blow this up a



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13:04:16 2 little more.

13:04:17 3 Q. Sure.

13:04:18 4 A. It's tough to see.

13:04:20 5 Q. That's 06 and 07 and then 08

13:04:22 6 is the third injection.

13:04:27 7 MR. SUH: Those aren't the

13:04:28 8 right -- you have to show him the

13:04:31 9 summary sheet as against the actual

13:04:34 10 sheet. Those are the ones that are

13:04:36 11 cited. Not just the two summary

13:04:40 12 sheets.

13:04:49 13 MR. YOUNG: I'll let you do

13:04:50 14 that on redirect.

13:04:51 15 Q. My simple question to you,

13:04:56 16 Dr. Davis, is that if you look back to

13:05:01 17 paragraph 138?

13:05:07 18 A. Sorry, those are actually

13:05:10 19 two different data files.

13:05:12 20 Q. Right.

13:05:12 21 A. Thank you very much. So

13:05:14 22 what pages?

13:05:15 23 Q. Of Dr. Goodman's witness

13:05:24 24 statement, Page 53. I'm going back to

13:05:29 25 Dr. Goodman's statement.

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13:05:31 2 A. Oh, sorry.

13:05:38 3 Q. And so am I correct at the  
13:05:44 4 bottom of the page that the original  
13:05:48 5 raw data values for decane, undecane  
13:05:58 6 and dodecane were available in the  
13:06:03 7 electronic data files?

13:06:05 8 A. I am getting a little bit  
13:06:19 9 confused here. Could you bring up the  
13:06:21 10 two -- I do need to see the data which  
13:06:23 11 we're actually talking about. I need  
13:06:26 12 to see the sheets.

13:06:28 13 Q. So we want to see USADA 179,  
13:06:39 14 which is in Exhibit 24, and USADA 155  
13:06:50 15 in Exhibit 24.

13:07:00 16 MR. BARNETT: Dr. Davis, you  
13:07:01 17 have the hard copy in front of you.

13:07:03 18 A. That's what I was looking  
13:07:04 19 for. Sorry.

13:07:15 20 Q. What the declaration says is  
13:07:18 21 USADA 179 and USADA 155. So does  
13:07:56 22 Dr. Goodman have the wrong cites?

13:08:14 23 A. Sorry, is that a question to  
13:08:15 24 me?

13:08:16 25 Q. Yes, take a look. What

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13:08:18 2 Dr. Goodman says -- you said you wanted  
13:08:20 3 to look at the data that was referred  
13:08:21 4 to and we have up on the screen the  
13:08:27 5 data that's referred to.

13:08:32 6 A. Yes.

13:08:35 7 Q. So can you answer my  
13:08:36 8 question. Do the original raw data for  
13:08:45 9 decane, undecane and dodecane exist in  
13:08:50 10 the electronic data files or were they  
13:08:53 11 lost forever?

13:08:55 12 A. I think maybe I misunderstood  
13:09:07 13 the point from Dr. Goodman. It does look  
13:09:11 14 as if they exist, but I might have  
13:09:14 15 misunderstood that point.

13:09:15 16 Q. On 139, paragraph 139 on  
13:09:26 17 Page 54.

13:09:27 18 A. We saw that.

13:09:28 19 Q. No, this is of his  
13:09:29 20 declaration, it's just the next page of  
13:09:31 21 his declaration. We'll put it up.  
13:09:33 22 It's the very next page of his  
13:09:35 23 declaration, sorry. And this is for  
13:09:50 24 the B sample, again, the original  
13:09:58 25 values for decane, undecane and

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13:10:01 2 dodecane aren't lost forever, they're  
13:10:05 3 in the electronic data files that you  
13:10:07 4 could have seen if you had asked Dr. --

13:10:11 5 A. No, I think what he's saying  
13:10:12 6 here is the reprocessing, is the  
13:10:15 7 parameters we should use to reprocess.  
13:10:17 8 I think that's what he's saying. In  
13:10:19 9 that sense it is true.

13:10:23 10 Q. But if the point is --

13:10:25 11 A. It's a good example of --

13:10:27 12 MR. RIVKIN: Maybe we can  
13:10:28 13 save some time. My understanding is  
13:10:30 14 that when you looked at the electronic  
13:10:31 15 data files all the original data was  
13:10:34 16 originally there. What you couldn't  
13:10:36 17 look at was how that data was manually  
13:10:41 18 manipulated the way you chose to; is  
13:10:44 19 that right?

13:10:44 20 THE WITNESS: Correct, yes.

13:11:02 21 Q. Did you spend a lot of time  
13:11:06 22 reviewing the documentation packets in  
13:11:11 23 this case?

13:11:11 24 A. Some time, yes.

13:11:13 25 Q. Did you spend a lot of time

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13:11:15 2 doing it before the first hearing?

13:11:17 3 A. I've done a lot of reading,  
13:11:20 4 yes.

13:11:20 5 Q. Did you notice that there  
13:11:25 6 was a different column name on the  
13:11:29 7 GC/MS than on the GC/C/IRMS?

13:11:33 8 A. I don't believe I did, no.

13:11:35 9 Q. And how did you first find  
13:11:43 10 out that that was the case?

13:11:45 11 A. I can't recall but I'm sure  
13:11:48 12 one of my colleagues will have told me.  
13:11:51 13 I don't know exactly.

13:11:52 14 Q. But it was after the  
13:11:53 15 hearing?

13:11:54 16 A. I actually can't recall. I  
13:11:56 17 can't recall.

13:11:58 18 MR. YOUNG: I have no  
13:11:59 19 further questions.

13:12:02 20 THE PRESIDENT: Any  
13:12:03 21 reexamination?

13:12:04 22 MR. SUH: Yes, we will have  
13:12:05 23 some. Yes, we do.

13:12:07 24 THE PRESIDENT: Please  
13:12:08 25 proceed.

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13:12:09 2 REDIRECT EXAMINATION

13:12:30 3 BY MR. SUH:

13:12:30 4 Q. With respect to the  
13:12:31 5 electronic data files, could you  
13:12:33 6 explain exactly what happened and what  
13:12:37 7 you were told when you arrived at LNDD?

13:12:41 8 A. Can I explain?

13:12:43 9 Q. Yes, can you explain what  
13:12:44 10 happened to them or what you were told  
13:12:46 11 happened to them when you arrived?

13:12:47 12 A. In relation to?

13:12:49 13 Q. In relation to the data that  
13:12:51 14 was actually eventually used during the  
13:12:53 15 reprocessing.

13:12:56 16 A. We were shown some CDs which  
13:12:59 17 had been extracted that morning from  
13:13:02 18 the hard disc of the computer. We then  
13:13:04 19 went to the room where the IsoPrime 1  
13:13:07 20 is based, attempts were made by the  
13:13:14 21 laboratory technicians to transfer that  
13:13:18 22 data onto the PC, but unfortunately  
13:13:21 23 they weren't able to do it. So I had  
13:13:23 24 to do it for them. Janine was there as  
13:13:27 25 well, so I had to help Janine too. So

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13:13:29 2 it's clear they didn't have a full  
13:13:31 3 understanding of the basic principles  
13:13:33 4 of the software. You should be able to  
13:13:35 5 load past results so you can -- for  
13:13:37 6 quality checks to make sure you can go  
13:13:39 7 back and make sure the linearities and  
13:13:42 8 stabilities and everything are okay.

13:13:43 9 And then after that, we  
13:13:51 10 determined that we wanted to reprocess  
13:13:53 11 the results in certain ways. I was not  
13:13:54 12 going to be allowed access to the EDFs,  
13:13:57 13 so I chose to get as much data as I  
13:14:02 14 possibly could even though that was  
13:14:03 15 limited. This is why we ran the  
13:14:05 16 samples without background subtraction,  
13:14:09 17 with background subtraction,  
13:14:11 18 automatically, manually and then on an  
13:14:13 19 IsoPrime -- on the IsoPrime 2. This is  
13:14:16 20 the process which revealed to us, it  
13:14:18 21 was very useful because it revealed to  
13:14:20 22 us the manual reintegration, the manual  
13:14:22 23 background corrections, and the -- also  
13:14:26 24 various aspects of the operation, the  
13:14:29 25 procedures effective for the samples,

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13:14:31 2 the samples were rerun as well. So it  
13:14:34 3 was very enlightening.

13:14:36 4 Q. Did you watch this  
13:14:37 5 reprocessing process take place?

13:14:39 6 A. I did, yes.

13:14:40 7 Q. And did you watch how many  
13:14:43 8 times the LNDD technicians attempted to  
13:14:46 9 manually reprocess using the same  
13:14:48 10 technique?

13:14:48 11 A. I did, yes. And Janine  
13:14:50 12 mentions it in her testimony, how I was  
13:14:53 13 keeping a scorecard and that's exactly  
13:14:55 14 what I was doing actually.

13:14:56 15 Q. What did you find noteworthy  
13:14:58 16 about watching them perform this manual  
13:15:00 17 reprocessing process?

13:15:01 18 A. Well, basically the number  
13:15:03 19 of times it took them to do it. Again,  
13:15:04 20 if this is an objective process, if the  
13:15:07 21 peaks start and end are in the correct  
13:15:09 22 places then you should simply move them  
13:15:11 23 from the incorrect places and place  
13:15:13 24 them to the correct place. In one  
13:15:14 25 sample it was over 20 attempts to



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13:15:16 2 determine the peak start and end. I  
13:15:19 3 think that shows that there has to be a  
13:15:21 4 degree of subjectivity involved in  
13:15:23 5 this, I think it's totally subjective,  
13:15:24 6 but I think the inability just to drag  
13:15:27 7 a point to the correct place and drag  
13:15:29 8 another point and hit reprocess is a  
13:15:31 9 point which really should be borne in  
13:15:34 10 mind.

13:15:35 11 Q. Again, is this process that  
13:15:37 12 you watched be performed consistent  
13:15:40 13 with what the IsoPrime manual states  
13:15:43 14 the manual processing should be used  
13:15:46 15 for?

13:15:50 16 A. Absolutely not.

13:15:51 17 Q. Is there anything different  
13:15:52 18 about the manual processing  
13:15:53 19 demonstration you did here compared to  
13:15:55 20 last time because -- whether or not  
13:15:57 21 there was a printer attached to it or  
13:15:59 22 not?

13:15:59 23 A. I didn't demonstrate the  
13:16:01 24 positioning of the background which  
13:16:04 25 again will have another multiple

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13:16:06 2 compound effect on the actual peak  
13:16:08 3 numbers. That was also done manually  
13:16:13 4 and again without any objective  
13:16:14 5 criteria.

13:16:15 6 MR. SUH: All right, no  
13:16:19 7 further questions.

13:16:22 8 THE PRESIDENT: Mr. Rivkin.

13:16:24 9 MR. RIVKIN: Thank you. If  
13:16:25 10 you could pull up the OS/2 software  
13:16:28 11 again and put it on the screen. I'd  
13:16:38 12 like to see, again, just take the raw  
13:16:40 13 data that you were using to manipulate  
13:16:43 14 manually. I just want to go through  
13:16:52 15 one part of your demonstration again  
13:16:54 16 just because I think you did it quickly  
13:16:55 17 and at least I didn't understand it.

13:16:57 18 THE WITNESS: I apologize.

13:16:59 19 MR. RIVKIN: No, no, it's  
13:17:00 20 not your fault. You showed how when  
13:17:02 21 you moved the start or end points it  
13:17:05 22 changed the isotope values by, you  
13:17:12 23 picked a couple and one was by .1, one  
13:17:14 24 was by .2. If you could just pick a  
13:17:20 25 peak that you can manipulate. And

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13:17:28 2 there was the view which had the actual  
13:17:33 3 number, which had the start and the --  
13:17:36 4 there we go. Great. Now, taking that  
13:17:45 5 -- let's take the middle one just  
13:17:47 6 because it's the middle one. Show me  
13:17:50 7 how far you would have to move either  
13:17:52 8 of the start or the end line to change  
13:17:56 9 the 25 -- me make sure I understand  
13:17:58 10 something. The delta/delta would be  
13:18:00 11 the difference between, for example,  
13:18:02 12 the two numbers that we're seeing at  
13:18:04 13 the tops of peaks, whatever the  
13:18:05 14 appropriate peaks are, right?

13:18:06 15 THE WITNESS: That's  
13:18:08 16 actually just the delta value, simply  
13:18:10 17 delta value. That's one compound.

13:18:14 18 MR. RIVKIN: That's one  
13:18:15 19 compound, right.

13:18:16 20 THE WITNESS: Yes.

13:18:17 21 MR. RIVKIN: But the  
13:18:17 22 delta/delta would be the difference  
13:18:19 23 between, for example, if the 26.56 were  
13:18:21 24 the ERC and the 25.93 were the  
13:18:25 25 metabolite that we were measuring the

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13:18:26 2 delta/delta would be the difference  
13:18:28 3 between those two numbers, right?

13:18:29 4 THE WITNESS: That's  
13:18:29 5 correct, yes.

13:18:30 6 MR. RIVKIN: So just so that  
13:18:31 7 I can understand, show me how far you  
13:18:36 8 would have to move the lines for the  
13:18:38 9 25.93 to change that by a full point.

13:18:42 10 THE WITNESS: Okay. Shall I  
13:18:43 11 start from the center of the peak and  
13:18:44 12 work backwards?

13:18:45 13 MR. RIVKIN: Yes, let's do  
13:18:47 14 the center peak.

13:18:48 15 THE WITNESS: One thing I  
13:18:49 16 should point out is that these are a  
13:18:51 17 lot cleaner and a lot easier to  
13:18:52 18 integrate and if you have worse  
13:18:54 19 chromatography, as we did in the  
13:18:56 20 samples, this would be a lot more --  
13:18:57 21 the changes were far more significant  
13:18:59 22 and this does not take into  
13:19:00 23 consideration the background correction  
13:19:01 24 either.

13:19:02 25 It's not recalculating, is

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13:19:26 2 it? Can we start using this peak if  
13:19:36 3 that's okay?

13:19:36 4 MR. RIVKIN: That's fine.  
13:19:37 5 So it started at 26 --

13:19:40 6 THE WITNESS: I'll  
13:19:42 7 recalculate. 25.73. 25.72. Of course  
13:19:48 8 as the slope changes, change in delta  
13:19:53 9 value will increase. 26.4, 27.

13:20:03 10 MR. RIVKIN: So now you've  
13:20:05 11 moved it by a point.

13:20:07 12 THE WITNESS: Yes. I think  
13:20:08 13 another point to remember is it does  
13:20:09 14 depend on the way you zoom in as well.  
13:20:12 15 You know, if you zoom in on one peak  
13:20:17 16 like that it looks a hell of a lot  
13:20:19 17 worse. If you zoom in a peak like  
13:20:24 18 that, almost looks reasonable. So the  
13:20:26 19 scaling, the scaling function on the  
13:20:29 20 OS/2 is not very good either.

13:20:31 21 So people when they zoom in  
13:20:33 22 they might think that is quite  
13:20:36 23 reasonable but as we've just seen  
13:20:37 24 earlier, it's not. And again, because  
13:20:40 25 they don't use the file save parameters

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13:20:45 2 function, we just have no idea and they  
13:20:46 3 have no idea, and that's the biggest  
13:20:49 4 problem. I think another thing to  
13:20:51 5 really reemphasize is manual  
13:20:54 6 integration will not cure bad  
13:20:57 7 chromatography, it's still there. If  
13:21:00 8 the chromatography is bad, manually  
13:21:02 9 integrating will not fix that. And the  
13:21:05 10 fact that the manual algorithm was  
13:21:08 11 unable to automatically reintegrate the  
13:21:10 12 peaks of Mr. Landis, any of his  
13:21:13 13 samples, any of his samples, that to me  
13:21:15 14 is an objective, as any objective  
13:21:17 15 criteria to determine the  
13:21:19 16 chromatography was not sufficient for  
13:21:20 17 the purpose of doing this isotopic  
13:21:22 18 analysis which had been rerun.

13:21:25 19 MR. RIVKIN: Thank you very  
13:21:25 20 much.

13:21:28 21 MR. PAULSSON: Dr. Davis, I  
13:21:29 22 wish to explore very quickly what  
13:21:32 23 implications flow from your testimony  
13:21:38 24 and your expert opinion. In answers to  
13:21:40 25 the final questions from Mr. Suh on

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13:21:42 2 redirect you said something to the  
13:21:43 3 effect that the inappropriateness of  
13:21:47 4 dragging points around by manual  
13:21:48 5 processing and then perhaps an English  
13:21:53 6 understatement you said should be  
13:21:56 7 considered. What your opinion is, the  
13:21:59 8 thrust of your opinion is that the  
13:22:00 9 analytical results should be cancelled?

13:22:04 10 THE WITNESS: Absolutely.

13:22:07 11 MR. PAULSSON: That means  
13:22:09 12 that this laboratory's personnel did  
13:22:14 13 not know what it was doing in operating  
13:22:17 14 this device or in any rate -- or at any  
13:22:20 15 rate did not do it to an acceptable  
13:22:23 16 professional standard?

13:22:24 17 THE WITNESS: Yes, I think  
13:22:25 18 that's a fair comment.

13:22:27 19 MR. PAULSSON: So should  
13:22:28 20 this laboratory be shut down?

13:22:31 21 THE WITNESS: I think it  
13:22:36 22 should certainly be retrained.

13:22:38 23 MR. PAULSSON: But even that  
13:22:42 24 opinion falls far short of what you say  
13:22:43 25 in your written statement, which is

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13:22:46 2 this: "I conclude that the  
13:22:49 3 laboratory," this is in paragraph 14,  
13:22:51 4 "has performed improper laboratory  
13:22:52 5 procedures and done other things to  
13:22:54 6 cover up its many errors for the  
13:22:57 7 purpose," "for the purpose of  
13:22:59 8 establishing an anti-doping violation  
13:23:02 9 in this case when the scientific  
13:23:04 10 evidence does not support it." We're  
13:23:07 11 far away from things that should be  
13:23:08 12 borne in mind, aren't we?

13:23:10 13 THE WITNESS: I'm a  
13:23:11 14 goodhearted man, I like to give people  
13:23:13 15 a second chance. But I think the -- I  
13:23:16 16 think the processes that were carried  
13:23:18 17 out were inexcusable and like you say,  
13:23:20 18 the overwriting data and other things  
13:23:23 19 which occurred were not right.

13:23:25 20 MR. PAULSSON: It's hard for  
13:23:26 21 me to think of anything worse that a  
13:23:28 22 scientist would do than to cover up and  
13:23:32 23 to act with a purpose of establishing a  
13:23:35 24 violation when the scientific data  
13:23:37 25 isn't there. Are you satisfied that



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13:23:39 2 you have proof of those two  
13:23:41 3 allegations?

13:23:41 4 THE WITNESS: Thinking very  
13:23:47 5 carefully, I do believe that they tried  
13:23:49 6 to make the analysis look better than  
13:23:52 7 it was. I think -- I think it's -- I'm  
13:23:55 8 not sure of when the whole stopped  
13:23:58 9 digging. I don't think they went out  
13:24:00 10 deliberately to mislead people but I  
13:24:03 11 think that was the result of the  
13:24:04 12 actions ultimately and they should have  
13:24:06 13 stopped and held their hands up.

13:24:12 14 THE PRESIDENT: That was a  
13:24:12 15 very serious allegation you made.

13:24:14 16 THE WITNESS: It was very  
13:24:15 17 serious.

13:24:16 18 THE PRESIDENT: As I  
13:24:16 19 understand it you just corrected it.

13:24:21 20 THE WITNESS: No, I stand by  
13:24:24 21 -- I stand by what I've written. I do  
13:24:26 22 stand by what I've written.

13:24:27 23 THE PRESIDENT: I see. Just  
13:24:29 24 one quick point. Paragraph 30 of your  
13:24:36 25 statement, have you got that in front

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13:24:43 2 of you?

13:24:43 3 THE WITNESS: I don't, no.

13:24:53 4 THE PRESIDENT: This is  
13:24:53 5 about the retesting of the B samples.

13:24:55 6 Have you got it on the screen?

13:25:01 7 THE WITNESS: Yes.

13:25:02 8 THE PRESIDENT: You don't  
13:25:03 9 mention the results in paragraph 34 but  
13:25:06 10 I think we know what the results were.  
13:25:08 11 But what I'm interested in is if you  
13:25:11 12 can help me understand the significance  
13:25:15 13 of your paragraph 33. What is the  
13:25:30 14 thrust of that, what is the  
13:25:32 15 significance of that in your opinion?  
13:25:34 16 I just want to understand what's being  
13:25:36 17 said there.

13:25:40 18 THE WITNESS: Basically what  
13:25:41 19 I'm saying is they have the ability to  
13:25:42 20 run the samples in the IsoPrime 2, so  
13:25:44 21 I'm not clear why they chose to run  
13:25:47 22 them on the older instrument when they  
13:25:49 23 could have had a more accurate, precise  
13:25:51 24 analysis on the new instrument.

13:25:55 25 THE PRESIDENT: So they

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13:25:56 2 could have done better, in your  
13:25:58 3 opinion, but --

13:26:00 4 THE WITNESS: The IsoPrime 2  
13:26:01 5 does not allow manual integration with  
13:26:03 6 the systems which they use.

13:26:06 7 THE PRESIDENT: Is it a  
13:26:07 8 suggestion they could have done better  
13:26:09 9 or are you suggesting that because they  
13:26:11 10 did what they did we discount entirely  
13:26:13 11 the result?

13:26:16 12 THE WITNESS: Sorry, are we  
13:26:23 13 talking about the retesting of the  
13:26:25 14 samples where the A sample was already  
13:26:27 15 -- was not run, the B samples were run  
13:26:30 16 first?

13:26:31 17 THE PRESIDENT: I'm talking  
13:26:32 18 about, as I understand it, retesting  
13:26:34 19 the B samples, and your comment is, and  
13:26:36 20 it seems to be a criticism that they  
13:26:39 21 retested on the model 2 and I'm just  
13:26:44 22 trying to understand what you're saying  
13:26:49 23 is the significance of that.

13:26:58 24 MR. SUH: For the panel's  
13:26:59 25 sake --

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13:27:00 2 THE PRESIDENT: Thank you,  
13:27:00 3 I'll just let the witness answer the  
13:27:02 4 question. I'm not a scientist, I'm  
13:27:17 5 just asking you what significance is  
13:27:19 6 there in the fact that they used a  
13:27:20 7 different machine?

13:27:21 8 THE WITNESS: What I'm  
13:27:22 9 trying to get at there is the fact that  
13:27:24 10 it would have been -- it would have  
13:27:27 11 been better if they could use the same  
13:27:28 12 -- right. My memory is just coming  
13:27:31 13 back now. What they seem to be doing  
13:27:34 14 is reprocessing the system where I  
13:27:36 15 would not be able to see the fact they  
13:27:38 16 were manually reintegrating the  
13:27:41 17 software, manually processing it. And  
13:27:42 18 therefore if you use the IsoPrime 2  
13:27:44 19 they would get better results which  
13:27:46 20 would appear better.

13:27:49 21 THE PRESIDENT: So this was  
13:27:50 22 another piece of misconduct on their  
13:27:52 23 part, is that what you're saying?

13:27:53 24 THE WITNESS: I think it was  
13:27:54 25 more a coverup again.

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13:27:56 2 THE PRESIDENT: A coverup.

13:27:58 3 I see.

13:27:58 4 Do either counsel have any

13:28:00 5 further questions here?

13:28:03 6 MR. SUH: No.

13:28:04 7 MR. YOUNG: No.

13:28:05 8 THE PRESIDENT: Thank you

13:28:06 9 very much, doctor.

13:28:07 10 We'll now adjourn until

13:28:10 11 2:45.

13:28:11 12 (Lunch recess: 1:28 p.m.)

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13:28:11 2 A F T E R N O O N S E S S I O N

14:52:29 3 2:57 p.m.

14:52:29 4 THE PRESIDENT: Mr. Suh, are  
14:57:09 5 you ready with your next witness?

14:57:11 6 MR. SUH: Yes, I am.

14:57:13 7 THE PRESIDENT: Thank you.

14:57:14 8 MR. SUH: We call Dr.

14:57:16 9 Goodman.

14:57:17 10 THE PRESIDENT: Thank you.

14:57:20 11 MR. RIVKIN: While he's  
14:57:22 12 coming up. I apologize for my delay  
14:57:24 13 and keeping everybody here. It's  
14:57:26 14 harder doing this in your own office.  
14:57:29 15 If we were in Auckland I'd be much more  
14:57:32 16 prompt.

14:57:55 17 THE PRESIDENT: Good  
14:57:55 18 afternoon, Dr. Goodman.

14:57:58 19 DR. GOODMAN: Good  
14:58:00 20 afternoon.

14:58:01 21 THE PRESIDENT: Would you  
14:58:02 22 please make the declaration. Do you  
14:58:04 23 declare that your opinions as an expert  
14:58:08 24 will be your sincerely held views on  
14:58:10 25 the topics in question?

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14:58:11 2 DR. GOODMAN: Yes.

14:58:12 3 THE PRESIDENT: Thank you

14:58:13 4 very much.

5 K E I T H G O O D M A N,

6 called as a witness on behalf of the

7 Appellant, having been first duly

8 affirmed by the President, was examined

9 and testified as follows:

10 DIRECT EXAMINATION

14:58:15 11 BY MR. SUH:

14:58:15 12 Q. Good afternoon, Dr. Goodman.

14:58:16 13 A. Good afternoon.

14:58:17 14 Q. Did you submit a declaration

14:58:19 15 in connection with the case that is now

14:58:21 16 before this panel?

14:58:23 17 A. Yes, I did.

14:58:23 18 Q. And in submitting that

14:58:26 19 declaration did you help prepare and

14:58:29 20 read and review it prior to its

14:58:32 21 submission?

14:58:32 22 A. Yes, I did.

14:58:33 23 Q. I would like you now to let

14:58:36 24 me know if you affirm its contents or

14:58:41 25 whether or not you have any corrections

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14:58:42 2 to it?

14:58:43 3 A. I do -- no, I do affirm its  
14:58:48 4 contents, and I don't have any  
14:58:51 5 corrections.

14:59:05 6 Q. Let's proceed. At this time  
14:59:07 7 have you had an opportunity to read the  
14:59:08 8 reply declarations?

14:59:10 9 A. Yes, I did.

14:59:10 10 Q. And would you like to take  
14:59:11 11 the opportunity to comment on any of  
14:59:13 12 the reply decorations?

14:59:15 13 A. Yes, I would.

14:59:16 14 Q. Why don't you for the sake  
14:59:22 15 of ease of reference identify the reply  
14:59:26 16 declaration and the paragraph that you  
14:59:28 17 would like to comment on.

14:59:29 18 A. Okay. I'd like to start  
14:59:32 19 with Dr. Ayotte, paragraph 13.

14:59:59 20 Q. And what comment would you  
15:00:00 21 have?

15:00:00 22 A. Yes. Dr. Ayotte is correct,  
15:00:04 23 I did mistake her testimony for that of  
15:00:08 24 Dr. Brenna's. And regarding the delta/  
15:00:12 25 deltas, it is true that the 11 ketoetio



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15:00:18 2 was the -- in the delta/delta  
15:00:20 3 calculation was the peak that was  
15:00:23 4 causing the delta/delta values to  
15:00:25 5 change.

15:00:30 6 Q. Do you have any other  
15:00:31 7 comments on paragraph 13?

15:00:33 8 A. Yes, I do. Further in that  
15:00:35 9 paragraph, Dr. Ayotte talks about the  
15:00:41 10 reprocessing of data. Of interest to  
15:00:47 11 me was the fact that an underlying  
15:00:50 12 chromatogram or data stream could be  
15:00:52 13 reprocessed and generate ranges of  
15:00:55 14 values that were in excess of what  
15:00:59 15 their stated level of uncertainty is at  
15:01:02 16 0.8 delta per mil. So nothing else has  
15:01:05 17 changed with the sample except that it  
15:01:09 18 has undergone a variety of different  
15:01:11 19 reprocessing. That to me suggests that  
15:01:15 20 the underlying data is indeed variable.

15:01:23 21 Q. All right. And when you say  
15:01:25 22 the underlying data is variable, what  
15:01:27 23 comment would you have on how reliable  
15:01:29 24 that data would be in order to find an  
15:01:31 25 adverse analytic finding?

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15:01:33 2 A. I think it seriously calls  
15:01:35 3 into question the quality of that data.  
15:01:38 4 Normally reprocessing doesn't introduce  
15:01:41 5 that sort of variability for samples  
15:01:47 6 that are well resolved and of good  
15:01:49 7 quality.

15:01:53 8 Q. Are there other paragraphs  
15:01:55 9 in the Ayotte, Christiane Ayotte's  
15:02:00 10 reply declaration that you would like  
15:02:01 11 to comment on?

15:02:02 12 A. Yes, there are. The next  
15:02:04 13 paragraph, starting at 25, this is in  
15:02:13 14 reference to chromatograms that avoid  
15:02:17 15 interferences. I stated that the  
15:02:21 16 chromatography was poor. I stand by  
15:02:24 17 that. I've independently evaluated in  
15:02:27 18 a quantitative manner, not qualitative  
15:02:31 19 as Dr. Ayotte, and I can confidently  
15:02:35 20 say that the chromatography is not of  
15:02:37 21 good quality.

15:02:38 22 Q. Are there other parts of  
15:02:48 23 Christiane Ayotte's declaration that  
15:02:51 24 you'd like to comment on?

15:02:53 25 A. Paragraph 26. This is

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15:03:00 2 regarding Dr. Meier-Augenstein's  
15:03:03 3 testimony. I affirm Dr. Meier-  
15:03:08 4 Augenstein's testimony regarding the  
15:03:11 5 effects of low delta value  
15:03:19 6 contaminants.

15:03:19 7 In addition, I'd like to add  
15:03:21 8 something that Dr. Meier-Augenstein did  
15:03:23 9 not indicate, and that is in cases  
15:03:28 10 where you're dealing with a matrix,  
15:03:31 11 even one derived from a natural source,  
15:03:35 12 it is really beyond the limits of the  
15:03:37 13 machine to quantitate it accurately at  
15:03:40 14 low levels. Under those cases, the  
15:03:43 15 perception or the perceived delta value  
15:03:45 16 by the machine can vary to an excessive  
15:03:48 17 degree and often beyond 70, minus 100,  
15:03:54 18 and minus 200 per mil. Certainly  
15:03:57 19 effect of those small peaks that have  
15:04:00 20 been incorrectly quantified yet they're  
15:04:04 21 outside the workable range of the  
15:04:06 22 instrument will contribute ultimately  
15:04:09 23 to the reliability of your analysis.  
15:04:18 24 It will contribute negatively to the  
15:04:21 25 reliability of your analysis.

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15:04:27 2 Q. Anything else in Christiane  
15:04:29 3 Ayotte's declaration?

15:04:30 4 A. No.

15:04:32 5 MR. RIVKIN: Before you  
15:04:32 6 leave that declaration then can I ask  
15:04:34 7 two questions about it. One was going  
15:04:36 8 back to paragraph 25, you made a very  
15:04:39 9 general statement in response to what  
15:04:40 10 she said. But specifically the last  
15:04:46 11 sentence says "The chromatograms of the  
15:04:48 12 analyses of athletes sample fraction 3  
15:04:53 13 containing" those two metabolites, I  
15:04:57 14 won't try to say them for Gail's sake,  
15:05:01 15 "showed no interference in the region  
15:05:03 16 they elute." Do you agree or disagree  
15:05:06 17 with that specific statement?

15:05:07 18 THE WITNESS: I disagree  
15:05:09 19 because of the following: If Dr.  
15:05:10 20 Ayotte and I were examining the same  
15:05:17 21 chromatograms which are printouts from  
15:05:19 22 the instrument, they were very  
15:05:21 23 compressed and not really designed to  
15:05:23 24 evaluate the low level contaminants.  
15:05:28 25 The size of the peaks that are capable

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15:05:31 2 of introducing even significant --  
15:05:34 3 significant errors of three, five, even  
15:05:37 4 10 delta would not necessarily show up  
15:05:40 5 on a plot of that scale.

15:05:42 6 Secondly --

15:05:44 7 MR. RIVKIN: Do you know if  
15:05:45 8 there were such peaks in the region  
15:05:47 9 where they elute or are you just  
15:05:49 10 speculating that there may have been  
15:05:52 11 because it was too compressed?

15:05:54 12 THE WITNESS: Yes, there may  
15:05:56 13 have been. She certainly has said that  
15:05:58 14 there was no interference. I'm saying  
15:06:01 15 I can't agree with that. We don't know  
15:06:03 16 if there was any interference. It  
15:06:06 17 wasn't an ideal way to look at the  
15:06:08 18 data.

15:06:17 19 MR. RIVKIN: The other --  
15:06:18 20 going back to what you said about  
15:06:20 21 paragraph 13, I just want to make sure  
15:06:22 22 I understood what you said about that  
15:06:24 23 too. You said you thought when the  
15:06:34 24 data was reprocessed and it led to  
15:06:36 25 different numbers outside the .8

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15:06:38 2 percent that must show a problem with  
15:06:40 3 the data. Is it a problem with the  
15:06:44 4 data or is it that in rerunning it  
15:06:49 5 perhaps different parameters were used  
15:06:51 6 for determining where the peaks started  
15:06:54 7 and stopped and that led to the  
15:06:57 8 different results as we've been seeing?

15:06:59 9 THE WITNESS: That all comes  
15:07:00 10 down to the fact that data that is clean  
15:07:05 11 and well resolved is less susceptible to  
15:07:08 12 changes in the parameters, but more  
15:07:12 13 importantly, reproducibility is a key  
15:07:14 14 component of a lab that's involved in  
15:07:17 15 this sort of analysis. It certainly is  
15:07:20 16 in what I do. If my stated variability  
15:07:25 17 for an assay is .8 per mil yet I've done  
15:07:29 18 nothing except reanalyze data that's been  
15:07:31 19 acquired using various algorithms, it  
15:07:34 20 really calls into question a couple of  
15:07:36 21 things. One, how good is the quality of  
15:07:39 22 the underlying data, and two, how  
15:07:42 23 reliable is this uncertainty of .8 per  
15:07:45 24 mil. What is it really based on. Here  
15:07:48 25 it's investigating a very small piece of

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15:07:52 2 the big picture and we're seeing  
15:07:55 3 considerable variation.

15:07:59 4 MR. RIVKIN: Okay. That's  
15:08:00 5 helpful. And I guess the last question  
15:08:02 6 to follow-up on that is my sense of  
15:08:07 7 science from having heard a number of  
15:08:09 8 scientists testify over time and just  
15:08:12 9 generally is that there is always a  
15:08:13 10 level of judgment built into it that  
15:08:19 11 when you're trying to read results  
15:08:21 12 often there is judgment applied, and as  
15:08:25 13 a scientist I'd be interested in your  
15:08:27 14 reaction to that statement and then how  
15:08:28 15 that applies to the judgment that the  
15:08:31 16 lab technicians were applying here in  
15:08:34 17 terms of how to read the data that they  
15:08:36 18 were seeing.

15:08:37 19 THE WITNESS: I think I  
15:08:37 20 understand your question, but please  
15:08:39 21 correct me if I don't get it right. In  
15:08:45 22 what I do I like to avoid judgment at  
15:08:47 23 all costs. I want the numbers to tell  
15:08:49 24 me. I want my methods to be reliable,  
15:08:51 25 and I work within the limits of error

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15:08:54 2 of those methods.

15:08:56 3 If I saw a situation that  
15:08:58 4 was -- when I see excess variability in  
15:09:03 5 a procedure that I'm conducting I will  
15:09:08 6 certainly not rely on those results. I  
15:09:11 7 will fix the problem. Or, in the case  
15:09:16 8 of a test such as this, if it's  
15:09:20 9 possible to reprocess the data or  
15:09:23 10 evaluate things more thoroughly up  
15:09:25 11 front and not just push through with a  
15:09:27 12 sample. I think it's important to have  
15:09:30 13 long term -- establish your methods  
15:09:34 14 over the long term and show that  
15:09:37 15 they're reliable, consistently reliable  
15:09:39 16 under a variety of different  
15:09:41 17 circumstances. Especially when dealing  
15:09:43 18 with matrix. I mean I think that's a  
15:09:45 19 big issue as well.

15:09:46 20 So back to the judgment  
15:09:49 21 issue. Ideally, one doesn't want to  
15:09:52 22 make a judgment. If I'm forced to make  
15:09:54 23 a judgment, my judgment will often -- I  
15:09:59 24 will -- I will take the data and not  
15:10:01 25 trust it rather than push forward data



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15:10:04 2 that I'm suspicious of.

15:10:07 3 MR. RIVKIN: Thank you.

15:10:17 4 BY MR. SUH:

15:10:18 5 Q. Turning your attention to  
15:10:20 6 Dr. Brenna's reply declaration, do you  
15:10:22 7 have any comment as to it?

15:10:23 8 A. Yes, I do.

15:10:28 9 Q. Perhaps could you go by  
15:10:30 10 paragraph?

15:10:31 11 A. It starts at paragraph 6.  
15:10:40 12 Here I wanted to make a clarification.  
15:10:42 13 This is regarding the AAA panel's  
15:10:44 14 decision paragraph 209 to 211  
15:10:49 15 suggesting that a dirty matrix can only  
15:10:55 16 work effectively in a positive control  
15:11:00 17 when detecting an exogenous substance  
15:11:02 18 and goes on to suggest that it's  
15:11:04 19 somehow more difficult to detect or  
15:11:07 20 remove an endogenous substance from  
15:11:12 21 urine rather than an exogenous  
15:11:15 22 substance.

15:11:17 23 My point is that they  
15:11:19 24 actually are derivatizing their samples  
15:11:21 25 to make them more amenable for analysis

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15:11:25 2 and that process essentially takes an  
15:11:27 3 endogenous substance and turns it into  
15:11:29 4 something that doesn't exist in the  
15:11:30 5 body.

15:11:31 6 So the statement that  
15:11:33 7 there's somehow a difference between an  
15:11:36 8 endogenous and exogenous substance and  
15:11:39 9 that in this case the substances are  
15:11:41 10 endogenous is actually incorrect. Once  
15:11:44 11 they're derivatized they're no longer  
15:11:47 12 substances that are found in the body.

15:11:57 13 Q. Do you have a comment to  
15:11:58 14 other portions of the reply  
15:11:59 15 declaration?

15:11:59 16 A. Yes, I do. Paragraph 16.  
15:12:08 17 This is regarding the two to one trace.  
15:12:10 18 As we've heard, the two to one trace is  
15:12:13 19 a representation of the 44 channel and  
15:12:17 20 the 45 channel, so it's the 45 channel  
15:12:20 21 over the 44 channel. One important --  
15:12:25 22 and the idea that one can somehow use  
15:12:28 23 this trace to glean some insight into  
15:12:32 24 peak identification, whether it be  
15:12:35 25 background correction or start and stop

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15:12:38 2 assignment, is something I don't agree  
15:12:42 3 with. It is not a procedure that's  
15:12:46 4 used in commercial software, and in  
15:12:51 5 fact, the two to one -- two over one  
15:12:54 6 trace has more noise in it than the  
15:12:57 7 underlying 44 trace simply because the  
15:13:01 8 45 channel is amplified to a much  
15:13:04 9 higher degree than the 44 channel in  
15:13:07 10 these instruments.

15:13:08 11 So there's the situation  
15:13:14 12 where if you're looking for minor peaks  
15:13:17 13 or things that could affect your -- the  
15:13:21 14 quality of your integration, looking at  
15:13:24 15 the two to one trace actually would  
15:13:26 16 probably hide, just based on signal to  
15:13:30 17 noise, you would get a better idea by  
15:13:33 18 just looking at the underlying trace,  
15:13:35 19 the 44 trace.

15:13:51 20 Q. Any other portions of that  
15:13:52 21 reply declaration that you have a  
15:13:54 22 comment on?

15:13:55 23 A. Yes, I'd also like to  
15:13:56 24 address your attention to the paper  
15:14:00 25 that Dr. Brenna refers to. The first

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15:14:05 2 time I saw this paper I was a graduate  
15:14:09 3 student in Dr. Brenna's lab and we  
15:14:13 4 discussed this paper and we recognized  
15:14:20 5 it was of poor quality for the  
15:14:22 6 following reasons: The idea that you  
15:14:24 7 could conduct a chromatographic  
15:14:27 8 measurement and somehow improve the  
15:14:29 9 chromatography with a data manipulation  
15:14:32 10 trick is just -- goes against the  
15:14:35 11 principles of chromatography.

15:14:37 12 The other thing that we  
15:14:39 13 noted in this paper, while being a  
15:14:41 14 short communication, is that the lab  
15:14:46 15 where this work was done, which is John  
15:14:50 16 Hayes' lab at Indiana University is not  
15:14:53 17 included as an author and we thought  
15:14:54 18 the fact that he wasn't on this paper  
15:14:56 19 was quite interesting. Perhaps  
15:15:02 20 suggesting that he too felt the same  
15:15:04 21 way we did.

15:15:17 22 Q. Any other comments?

15:15:18 23 A. Yes. Paragraph 18. This is  
15:15:28 24 in regards to the identity of the  
15:15:32 25 columns in the instruments. Dr. Brenna

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15:15:36 2 suggests that, actually in paragraph 19  
15:15:42 3 as well, that I'm speculating about the  
15:15:46 4 columns. Well, actually I was reading  
15:15:48 5 what was provided to me in the document  
15:15:50 6 package. Without any other knowledge  
15:15:56 7 how am I to rely on anything but what  
15:15:58 8 was in the document package and what  
15:16:00 9 was recorded at LNDD?

15:16:16 10 MR. SUH: No further  
15:16:17 11 questions.

15:16:18 12 CROSS EXAMINATION

15:16:20 13 BY MR. BARNETT:

15:16:20 14 Q. Good afternoon, Dr. Goodman.

15:16:23 15 A. Good afternoon.

15:16:24 16 Q. When were you retained by  
15:16:26 17 Mr. Landis to testify in this appeal,  
15:16:35 18 approximately? This is not a date  
15:16:37 19 test.

15:16:37 20 A. When I agreed to work with  
15:16:38 21 him and his team?

15:16:39 22 Q. Yes.

15:16:40 23 A. I'd say early this year  
15:16:45 24 maybe.

15:16:47 25 Q. Are you aware that

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15:16:54 2 Appellant's brief in this matter was  
15:16:56 3 filed in November of 2007?

15:16:58 4 A. Yes.

15:17:03 5 Q. At paragraph 5 of your  
15:17:05 6 witness statement you indicate that  
15:17:07 7 you're testifying here at a rate that  
15:17:08 8 is "below what you would normally  
15:17:11 9 charge for this kind of case." How  
15:17:15 10 many of these types of cases have you  
15:17:16 11 testified in?

15:17:18 12 A. You mean testosterone doping  
15:17:24 13 IRMS?

15:17:25 14 Q. Well, I guess I'm asking in  
15:17:26 15 paragraph 5 what did you mean by "this  
15:17:28 16 kind of case"?

15:17:31 17 A. Oh, well, I was involved in  
15:17:36 18 a case in '99 involving a US track and  
15:17:40 19 field athlete.

15:17:41 20 Q. That was the Dennis Mitchell  
15:17:43 21 case?

15:17:43 22 A. Yes, it was.

15:17:44 23 Q. That was before the  
15:17:46 24 existence of WADA, correct?

15:17:48 25 A. I believe so, yes.

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15:17:49 2 Q. And therefore, before the  
15:17:51 3 ISL existed?

15:17:52 4 A. I believe so.

15:18:00 5 Q. Any others besides the  
15:18:02 6 Dennis Mitchell case?

15:18:03 7 A. No.

15:18:03 8 Q. How about any type of case,  
15:18:05 9 commercial litigation have you  
15:18:06 10 testified as an expert witness in  
15:18:09 11 anything else?

15:18:09 12 A. No, we haven't.

15:18:11 13 Q. We have to be especially  
15:18:12 14 careful not to talk over each other  
15:18:14 15 because I wore out my welcome yesterday  
15:18:18 16 with our nice court reporter.

15:18:24 17 You discussed working with  
15:18:25 18 Dr. Brenna. In fact, you received your  
15:18:27 19 Ph.D. under his guidance?

15:18:30 20 A. That's correct.

15:18:31 21 Q. In your opinion is Dr.  
15:18:34 22 Brenna a credible scientist in the  
15:18:35 23 field of IRMS?

15:18:36 24 A. I believe so.

15:18:37 25 Q. And are you familiar with

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15:18:38 2 Dr. Matthews' work?

15:18:39 3 A. Yes.

15:18:39 4 Q. Also a credible scientist in  
15:18:41 5 this field?

15:18:43 6 A. From what I can tell. I'm  
15:18:44 7 not as expert in the areas that he is  
15:18:47 8 involved in, but...

15:18:52 9 Q. And what areas do you feel  
15:18:54 10 that he has more expertise in?

15:18:58 11 THE PRESIDENT: Excuse me,  
15:18:59 12 one minute. Was your answer yes, I'm  
15:19:02 13 not an expert on the areas that he's  
15:19:04 14 involved with, but yes, I agree he's a  
15:19:06 15 credible scientist?

15:19:08 16 A. Let me just correct that. I  
15:19:10 17 agree that he's a credible scientist.  
15:19:13 18 I'm familiar with his work.

15:19:18 19 Q. Something of a pioneer in  
15:19:20 20 fact, right, as to IRMS?

15:19:23 21 A. Yes, he worked in a lab that  
15:19:26 22 played a significant role in the  
15:19:28 23 development of isotope ratio mass  
15:19:30 24 spectrometry.

15:19:32 25 Q. In your current position are



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15:19:34 2 you actively involved in performing  
15:19:36 3 research in the area of GC/C/IRMS?

15:19:39 4 A. No, not currently.

15:19:41 5 Q. And you also have not  
15:19:44 6 recently published in that field,  
15:19:46 7 correct?

15:19:46 8 A. No.

15:19:48 9 Q. When would be the last time  
15:19:49 10 that you published a paper that you  
15:19:52 11 consider to be relevant to that field?

15:19:53 12 A. GC/C/IRMS?

15:20:01 13 Q. Yes.

15:20:02 14 A. That would have been in '98.

15:20:04 15 Q. You're familiar with the Mix  
15:20:09 16 Cal Acetate that we've talked about  
15:20:10 17 here today?

15:20:10 18 A. Yes, I am.

15:20:11 19 Q. And what are the -- what  
15:20:16 20 steroid standards are contained in  
15:20:19 21 LNDD's Mix Cal Acetate?

15:20:20 22 A. They have several standards  
15:20:22 23 that are contained. They also have an  
15:20:24 24 internal standard that they include.

15:20:30 25 Q. I don't mean this to be a

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15:20:33 2 memory test. Why don't we bring up  
15:20:36 3 paragraph 29 of your testimony?

15:20:38 4 A. Yes, so it contains four  
15:20:40 5 steroids. We have the 5-alpha AC which  
15:20:48 6 is the internal standard as they've  
15:20:51 7 described, etiocholanolone AC, beta  
15:20:58 8 androstane diol, and 11  
15:21:02 9 ketoetiocholanolone.

15:21:06 10 Q. And those are the ones  
15:21:07 11 listed in paragraph 29 of your  
15:21:10 12 declaration, correct?

15:21:11 13 A. That's correct.

15:21:11 14 Q. Now let's look at paragraph  
15:21:14 15 104 of your declaration. And generally  
15:21:33 16 this paragraph discusses whether you  
15:21:35 17 can calculate relative retention times  
15:21:38 18 using the Mix Cal Acetate, correct?

15:21:40 19 A. That is correct.

15:21:41 20 Q. And in the second sentence  
15:21:44 21 you point out that your position that  
15:21:46 22 you cannot because the following  
15:21:49 23 metabolites are not present and which  
15:21:51 24 following metabolites do you indicate  
15:21:53 25 are not present in the Mix Cal Acetate?

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15:21:55 2 A. 5-alpha, Pdiol androne --  
15:22:02 3 andro, sorry.

15:22:03 4 Q. If you would, look at the  
15:22:04 5 last sentence for me and if you could  
15:22:07 6 just read that in for the record.

15:22:10 7 A. "Therefore is undisputed  
15:22:11 8 that Mix Cal Acetate cannot be used to  
15:22:14 9 identify 5-alpha, andro and 5-beta by  
15:22:17 10 relative retention time."

15:22:19 11 Q. Now, Mr. Suh gave you a  
15:22:22 12 chance to correct any mistakes in your  
15:22:25 13 testimony and you indicated that you  
15:22:26 14 have reviewed it. Is that a mistake  
15:22:28 15 that you'd like to correct?

15:22:29 16 A. No, it is not.

15:22:36 17 Q. You don't believe the 5-beta  
15:22:38 18 there was supposed to be Pdiol?

15:22:40 19 A. Oh, let's see. Oh, yes, I  
15:22:54 20 see that mistake.

15:22:58 21 Q. And in fact you say in the  
15:23:00 22 sentence before that it's Pdiol that's  
15:23:02 23 missing from the Mix Cal Acetate, not  
15:23:04 24 5-beta?

15:23:05 25 A. Right.

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15:23:05 2 Q. So to clarify the record,  
15:23:07 3 5-beta is in the Mix Cal Acetate; is  
15:23:11 4 that correct?

15:23:11 5 A. Yes.

15:23:12 6 MR. BARNETT: Could we bring  
15:23:29 7 up Page 39 of Appellant's brief and put  
15:23:32 8 it side by side with paragraph 104.  
15:23:44 9 And if you could blow up both of the  
15:23:46 10 paragraphs beginning "However, Dr.  
15:23:49 11 Brenna."

15:23:57 12 Q. You see those two paragraphs  
15:23:58 13 and you understand what we're comparing  
15:24:00 14 there?

15:24:01 15 A. It's a little hard to see on  
15:24:04 16 the screen.

15:24:10 17 MR. BARNETT: Can we blow  
15:24:11 18 those up any larger, Jennefer?

15:24:27 19 MS. BARTHOLOMEW: The  
15:24:28 20 program is what it is.

15:24:31 21 Q. You have your witness  
15:24:33 22 declaration in front of you, correct?

15:24:35 23 A. Yes, I do. I have to flip  
15:24:36 24 back and forth.

15:24:38 25 MR. BARNETT: Do we have a

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15:24:39 2 clean copy of Appellant's brief we can  
15:24:42 3 give him to view.

15:24:44 4 Q. Why don't we do this --

15:24:45 5 A. I'll try and put them side  
15:24:47 6 by side.

15:24:48 7 MR. BARNETT: Jennefer, if  
15:24:50 8 you pull up the brief I think he has  
15:24:53 9 his declaration in front of him.

15:25:00 10 Q. So if you will visually  
15:25:02 11 compare that paragraph to the paragraph  
15:25:06 12 within your declaration, I'm just  
15:25:08 13 trying to understand exactly how your  
15:25:09 14 testimony was crafted and my point is  
15:25:12 15 those two paragraphs are exactly the  
15:25:13 16 same, correct?

15:25:16 17 A. Yes, they do.

15:25:37 18 Q. So that paragraph was simply  
15:25:39 19 pasted into your declaration?

15:25:40 20 A. It appears that's the case.

15:25:42 21 Q. And isn't it true that  
15:25:46 22 there's significant portions of your  
15:25:47 23 declaration was just pasted in from  
15:25:49 24 Appellant's brief?

15:25:51 25 A. What do you mean by

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15:25:53 2 significant?

15:25:53 3 Q. Well, let's keep going. If  
15:25:55 4 you'll look at paragraph 105 and  
15:25:59 5 Jennefer will bring up Page 41 of the  
15:26:01 6 brief. And if we can highlight the  
15:26:09 7 sentence beginning "The majority panel,  
15:26:21 8 in finding."

15:26:25 9 A. And what page am I supposed  
15:26:27 10 to be referring to?

15:26:28 11 Q. You're looking at paragraph  
15:26:29 12 105 of your testimony.

15:26:31 13 A. Yes.

15:26:31 14 Q. Pasted in again, correct?

15:26:52 15 A. Yes, that portion, yes is  
15:27:12 16 identical.

15:27:12 17 Q. And that's pasted in from  
15:27:14 18 the brief that was written before you  
15:27:16 19 joined the case?

15:27:18 20 A. Yes.

15:27:18 21 Q. And would you -- and you  
15:27:28 22 don't have to, but for the sake of  
15:27:30 23 time, my representation is that there  
15:27:31 24 are numerous pages that have been  
15:27:34 25 pasted in. Do you think that's a fair

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15:27:37 2 characterization or should we go  
15:27:40 3 through more?

15:27:41 4 A. We could.

15:27:44 5 Q. Let's look at the next  
15:27:46 6 paragraph, paragraph 106. That's Page  
15:28:02 7 41, 42, the carryover paragraph,  
15:28:04 8 Jennefer. First if you'll bring up "In  
15:28:07 9 finding the TD2003IDCR." Because that  
15:28:18 10 carries over, that's the first sentence  
15:28:19 11 of your paragraph 106, correct?

15:28:22 12 A. It starts out "In finding  
15:28:24 13 that."

15:28:27 14 Q. It does, right?

15:28:29 15 A. On mine. I can't see that  
15:28:32 16 on yours.

15:28:36 17 Q. How about this, you read  
15:28:37 18 your first sentence from paragraph 106  
15:28:39 19 and we'll look at the screen at the  
15:28:41 20 indented paragraph.

15:28:45 21 A. "In finding that TD2003IDCR  
15:28:49 22 does not apply, the majority panel  
15:28:50 23 stated that two different instruments  
15:28:52 24 could not have comparable retention  
15:28:54 25 times/relative retention times due to

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15:28:56 2 length of plumbing in the GC/C/IRMS  
15:28:59 3 instrument."

15:29:00 4 Q. Same sentence, correct?

15:29:07 5 A. Okay, now I see it.

15:29:13 6 THE PRESIDENT: Mr. Barnett,  
15:29:14 7 we have a suggestion here in the  
15:29:15 8 interest of time, that if you wish to  
15:29:17 9 you could produce a list later rather  
15:29:20 10 than -- if the witness is willing,  
15:29:23 11 rather than take time going through all  
15:29:25 12 the comparisons. I know you've made  
15:29:27 13 the offer, but I'm wondering whether it  
15:29:29 14 might be appropriate if we do that  
15:29:32 15 rather than go through all of it. I  
15:29:35 16 mean --

15:29:35 17 MR. BARNETT: I appreciate  
15:29:36 18 that proposal. I would suggest the  
15:29:38 19 best way to do it, because there are  
15:29:40 20 some sections where a sentence is left  
15:29:42 21 out, is we will present a copy of the  
15:29:44 22 two and Ms. Sloan will figure out a way  
15:29:48 23 to correctly highlight it to show the  
15:29:50 24 point that we're discussing if that's  
15:29:52 25 acceptable.



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15:29:59 2 Q. Let's return to paragraph  
15:30:01 3 105 of your testimony. You're at that  
15:30:17 4 paragraph?

15:30:18 5 A. Yes.

15:30:18 6 Q. And this quotes a paragraph  
15:30:22 7 from the panel below's decision,  
15:30:25 8 correct?

15:30:25 9 A. Yes.

15:30:25 10 Q. Could you just read that in  
15:30:27 11 for the record so it's clear.

15:30:29 12 A. "However," starting  
15:30:32 13 "However"?

15:30:32 14 Q. Yes.

15:30:32 15 A. "However, it must be noted,  
15:30:35 16 that TD2003IDCR does not apply to RRTs"  
15:30:40 17 --

15:30:40 18 Q. Let me stop you there.

15:30:42 19 A. Relative retention times,  
15:30:44 20 "between two different and separate  
15:30:46 21 instruments that are not of the same  
15:30:47 22 type. Therefore, Dr. Meier-Augenstein  
15:30:50 23 misdirected himself in his testimony  
15:30:52 24 before the panel by comparing relative  
15:30:55 25 retention times not between two GC/MS

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15:30:59 2 or two GC/C/IRMS instruments, but  
15:31:02 3 instead between one GC/MS and one  
15:31:05 4 GC/C/IRMS."

15:31:08 5 Q. Thank you, and then below  
15:31:09 6 that you say, "This is incorrect and  
15:31:12 7 without any support in the evidence,"  
15:31:15 8 correct?

15:31:16 9 A. Sorry?

15:31:18 10 Q. Let me take you through it  
15:31:20 11 directly. Directly below that sentence  
15:31:23 12 it says "Majority Award" paragraph 182.  
15:31:26 13 You say again, "This is incorrect and  
15:31:28 14 without any support in the evidence  
15:31:29 15 produced at the arbitration, even by  
15:31:31 16 appellee's own witnesses." That's your  
15:31:33 17 testimony?

15:31:33 18 A. Yes.

15:31:34 19 Q. Are you familiar with WADA  
15:31:36 20 TD2003IDCR?

15:31:40 21 A. Yes.

15:31:41 22 MR. BARNETT: Could we bring  
15:31:43 23 up that document. And for the panel's  
15:31:51 24 reference do we have an exhibit cite?  
15:31:54 25 Exhibit 12.

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15:32:02 2 Q. If it will help, I have a  
15:32:04 3 hard copy for you. Do you need some  
15:32:07 4 time to review this?

15:32:08 5 A. Is there a particular  
15:32:09 6 section you're referring to?

15:32:11 7 Q. The paragraph under  
15:32:12 8 "Chromatographic separation" on the  
15:32:15 9 first page.

15:32:23 10 THE PRESIDENT: Take as long  
15:32:24 11 as you want and just tell us when  
15:32:26 12 you're ready.

15:32:26 13 A. I don't -- I don't see where  
15:32:29 14 you're referring to on this. Is that  
15:32:34 15 the right one?

15:32:35 16 Q. No, maybe I handed you the  
15:32:36 17 wrong one. I'll give you my  
15:32:50 18 highlighted copy which simply has the  
15:32:52 19 paragraph marked for opposing counsel's  
15:32:54 20 benefit. And again, take your time to  
15:32:58 21 review the document if you need to.

15:33:40 22 A. Okay.

15:33:40 23 Q. Could you point the panel to  
15:33:42 24 the section in that document where it  
15:33:44 25 discusses relative retention times?

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15:33:46 2 A. It doesn't -- it doesn't say  
15:33:54 3 anything about relative retention  
15:33:56 4 times, but it also doesn't say anything  
15:33:58 5 about two different instruments.

15:34:00 6 Q. Thank you. Let's look at  
15:34:02 7 paragraph 92 of your testimony, please.  
15:34:22 8 And the first paragraph before we carry  
15:34:24 9 over to the next page for the record  
15:34:26 10 says "The method files for the GC/MS  
15:34:30 11 and the GC/C/IRMS runs the tested  
15:34:33 12 sample 995474 show dramatically  
15:34:37 13 different conditions. For the GC/MS,  
15:34:40 14 the GC method files show the  
15:34:42 15 following." Are you in the same place?

15:34:44 16 A. Yes.

15:34:44 17 MR. BARNETT: Then if we  
15:34:45 18 could turn the page and blow up that  
15:34:48 19 section.

15:34:49 20 Q. Could you tell the panel  
15:34:50 21 what your understanding is regarding  
15:34:52 22 what you've presented here?

15:34:54 23 A. This refers to temperature  
15:34:58 24 programs for the GC/MS and the  
15:35:02 25 GC/C/IRMS.

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15:35:07 2 Q. And do you believe you  
15:35:08 3 accurately reflected the temperature  
15:35:11 4 programs in your testimony?

15:35:12 5 A. I believe so from the  
15:35:14 6 information I was provided.

15:35:17 7 Q. Were you provided the doc  
15:35:22 8 packs and other documents produced by  
15:35:23 9 the laboratory to review?

15:35:24 10 A. Yes.

15:35:25 11 MR. BARNETT: If we could  
15:35:27 12 bring up side by side with that LNDD 00  
15:35:31 13 -- sorry, 0664.

15:35:59 14 Q. Let me also give you a hard  
15:36:01 15 copy of this document.

15:36:12 16 MR. BARNETT: And can we  
15:36:13 17 blow up the section beginning  
15:36:17 18 "Conditions GC," Jennefer. Actually  
15:36:20 19 you can just blow up the conditions GC  
15:36:24 20 if that will make it any bigger.

15:36:34 21 Q. Take your time to review  
15:36:36 22 LNDD 0664 if you would, Dr. Goodman.  
15:36:44 23 And while you're reviewing it just let  
15:36:46 24 me establish you would agree with me  
15:36:47 25 that this is the document that

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15:36:50 2 represents the temperature file for the  
15:36:52 3 GC/MS analysis at LNDD?

15:36:56 4 A. It appears to be the case.

15:36:57 5 Q. It's method M-AN-52,  
15:37:00 6 correct?

15:37:00 7 A. Correct.

15:37:01 8 Q. Just let me know when you  
15:37:03 9 feel comfortable to talk about this  
15:37:04 10 document.

15:37:39 11 A. Okay.

15:37:40 12 Q. Do you recall if you  
15:37:41 13 reviewed this document before  
15:37:46 14 submitting your testimony?

15:37:48 15 A. I don't recall but I do see  
15:38:01 16 that there's a mistake.

15:38:03 17 Q. And we'll come to that. You  
15:38:05 18 don't recall reviewing this document,  
15:38:07 19 it's not one that stands out to you?

15:38:09 20 A. No. I mean the specifics of  
15:38:13 21 it, I mean now I see that there appears  
15:38:15 22 to be a mistake in the reporting of it.

15:38:17 23 Q. Okay. Let's leave this up  
15:38:19 24 on the screen, but if you would just  
15:38:21 25 turn for me in your hard copy, turn for

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15:38:24 2 me to paragraph 102 of your testimony.

15:38:33 3 A. Yes.

15:38:34 4 Q. In the middle of that  
15:38:35 5 paragraph you refer to LNDD 00664. But  
15:38:43 6 the title you're referring to is SOP  
15:38:46 7 M-AN-52. Do you think you just got the  
15:38:51 8 cite wrong there in your paragraph and  
15:38:55 9 that you were actually referring to  
15:38:57 10 this document?

15:39:10 11 A. Yes, I -- then I wouldn't  
15:39:12 12 have made the mistake with a column  
15:39:14 13 with this. So I must have been reading  
15:39:16 14 a different document.

15:39:20 15 Q. Explain to me what you mean  
15:39:21 16 by that?

15:39:21 17 A. What I read in the doc pack  
15:39:24 18 indicated a difference in columns.

15:39:32 19 Q. Let me just be clear. In  
15:39:34 20 paragraph 102 you're relying on this  
15:39:36 21 document as the basis for there being  
15:39:38 22 two different columns, correct?

15:39:39 23 A. Yes. As I explained in 99.

15:40:05 24 Q. I was simply surprised that  
15:40:06 25 you didn't remember the document. Now

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15:40:09 2 let's go back and you mentioned that  
15:40:10 3 there's a mistake. Sorry, now we need  
15:40:22 4 to be back at 92 of your testimony.  
15:40:27 5 And the mistake is you skipped a step  
15:40:30 6 in the GC/MS temperature program when  
15:40:33 7 recording it into your testimony,  
15:40:35 8 correct?

15:40:36 9 A. Compared to this document  
15:40:38 10 that appears to be the case.

15:40:39 11 Q. Which step did you skip?

15:40:44 12 A. There appears to be a  
15:40:52 13 temperature hold at 270 degrees.

15:40:57 14 Q. For how long?

15:40:58 15 A. 12 minutes.

15:40:59 16 Q. Makes a big difference if  
15:41:00 17 you consider that they held it for 12  
15:41:02 18 minutes or you're not aware of that  
15:41:05 19 when drawing exclusions, correct?

15:41:07 20 A. It's possible I guess. It  
15:41:14 21 depends on where things elute relative  
15:41:17 22 to that change.

15:41:19 23 Q. So if --

15:41:19 24 A. If they elute before that  
15:41:23 25 plateau that's not going to affect the



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15:41:27 2 retention time for the components that  
15:41:30 3 eluted.

15:41:31 4 Q. And if the steroids of  
15:41:33 5 interest actually elute during that 12  
15:41:35 6 minute hold that would have a  
15:41:36 7 significant impact on how you view the  
15:41:38 8 two method files, correct?

15:41:40 9 A. Not necessarily, if there  
15:41:42 10 are still changes in them or they're  
15:41:45 11 still different. It would certainly  
15:41:47 12 indicate that there was a change in the  
15:41:49 13 GC/MS temperature program, but they  
15:41:52 14 still can be different from the GC/MS  
15:41:55 15 to the GC/C/IRMS.

15:41:57 16 Q. And regardless, you did not  
15:42:00 17 have all of the steps of the actual  
15:42:01 18 GC/MS temperature program in mind when  
15:42:04 19 you provided your written testimony?

15:42:06 20 A. This -- I mean I agree that  
15:42:08 21 there is a mistake between these two  
15:42:12 22 programs.

15:42:12 23 Q. Dr. Goodman, please look at  
15:42:16 24 paragraph --

15:42:17 25 MR. PAULSSON: Mr. Barnett,

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15:42:18 2 please, before you go on. Is this  
15:42:20 3 paragraph 92 one of the passages that  
15:42:24 4 would be similar?

15:42:25 5 MR. BARNETT: It is pasted  
15:42:27 6 in directly from the brief.

15:42:29 7 MR. PAULSSON: Is that  
15:42:32 8 omission the same?

15:42:34 9 MR. BARNETT: Is the mistake  
15:42:35 10 the same? Yes.

15:42:38 11 Q. If you could look at  
15:42:39 12 paragraph 145 of your testimony for me,  
15:42:42 13 Dr. Goodman.

15:42:50 14 A. Yes.

15:42:50 15 Q. This is the paragraph where  
15:42:52 16 you adopt in its entirety Dr. Simon  
15:42:55 17 Davis' testimony, correct?

15:42:57 18 A. That is correct.

15:42:58 19 Q. We'll get you a hard copy of  
15:43:10 20 Dr. Davis' testimony. And if you could  
15:43:25 21 go to Page 20. If you could look at  
15:43:28 22 paragraph 80 and we could bring up --  
15:43:31 23 let's actually bring up paragraph 79  
15:43:33 24 and 80. Please take a minute to review  
15:43:39 25 that if you need it.

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15:43:40 2 A. 79 and 80?

15:43:42 3 Q. Yes. Actually, if you'll  
15:43:43 4 just review that whole page I have  
15:43:45 5 questions for you all the way through  
15:43:47 6 the end of paragraph 83.

15:44:10 7 A. Okay.

15:44:11 8 MR. BARNETT: If we could  
15:44:12 9 blow up 79 and 80.

15:44:18 10 Q. Do you understand what  
15:44:22 11 argument Dr. Davis is making here?

15:44:27 12 A. In the combination of 79 and  
15:44:29 13 80?

15:44:30 14 Q. Yes.

15:44:30 15 A. Oh, yes, I do.

15:44:34 16 Q. Can you explain -- first let  
15:44:36 17 me ask have the -- well, can you  
15:44:38 18 explain what the lifting rings are for  
15:44:40 19 the panel?

15:44:41 20 A. Yes. The lifting rings are  
15:44:44 21 what allow the magnet, which is very  
15:44:47 22 heavy, to be moved. They're usually  
15:44:50 23 made of iron. The issue is that it  
15:44:53 24 could affect the quality of the  
15:44:56 25 analysis by disrupting the magnetic

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15:45:00 2 field.

15:45:01 3 Q. And the specific claim in  
15:45:02 4 paragraph 80 is that the lifting rings  
15:45:04 5 were left on the IsoPrime 2 instrument  
15:45:08 6 by LNDD, correct?

15:45:10 7 A. Yes.

15:45:13 8 Q. And so that the record is  
15:45:14 9 clear, IsoPrime 2 is not what Mr.  
15:45:18 10 Landis' stage 17 samples were analyzed  
15:45:21 11 on, correct?

15:45:22 12 A. Correct.

15:45:24 13 Q. This is something that was  
15:45:26 14 used only during the reprocessing,  
15:45:28 15 correct?

15:45:28 16 A. The B samples?

15:45:31 17 Q. The further analysis?

15:45:33 18 A. Yes.

15:45:33 19 Q. Sorry.

15:45:41 20 MR. BARNETT: And then if we  
15:45:42 21 can bring up 81.

15:45:43 22 Q. And you can look at it. I  
15:45:45 23 think that makes the point about the  
15:45:46 24 magnet that you just did, correct?

15:45:48 25 A. Yes, it does.

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15:45:49 2 Q. And Dr. Davis concludes in  
15:45:53 3 paragraph 82, and I guess you conclude  
15:45:55 4 by adoption that "leaving those rings  
15:45:58 5 on shows LNDD's lack of familiarity  
15:46:00 6 with its own instrument." Do you see  
15:46:02 7 that?

15:46:02 8 A. Yes.

15:46:03 9 Q. Have you ever used and  
15:46:20 10 performed analysis on a machine where  
15:46:22 11 the lifting rings were still attached?

15:46:25 12 A. I don't believe so.

15:46:32 13 Q. According to your testimony  
15:46:33 14 it would be -- you wouldn't be  
15:46:36 15 competent if you did, correct?

15:46:37 16 A. In the case that they're  
15:46:39 17 removable?

15:46:41 18 Q. I'm not sure I understand  
15:46:42 19 what you mean by that.

15:46:44 20 A. I was just trying to  
15:46:45 21 understand the question.

15:46:46 22 Q. My question simply is you  
15:46:48 23 and Dr. Davis join in your testimony to  
15:46:50 24 say it would be incompetent to perform  
15:46:52 25 analysis on a machine where the lifting

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15:46:54 2 rings are still attached; am I right so  
15:46:57 3 far?

15:46:57 4 A. Yes.

15:46:57 5 Q. And I'm asking have you ever  
15:46:59 6 done that in your professional career?

15:47:01 7 A. Not that I'm aware of.

15:47:02 8 Q. We discussed earlier that  
15:47:04 9 you did the work for your Ph.D. thesis  
15:47:08 10 in Dr. Brenna's lab, correct?

15:47:10 11 A. That is correct.

15:47:10 12 Q. Let me hand you the hard  
15:47:12 13 copy of a photograph and if we can  
15:47:15 14 bring it up.

15:47:21 15 THE PRESIDENT: Has Mr. Suh  
15:47:22 16 seen this photograph?

15:47:23 17 MR. SUH: No.

15:47:24 18 MR. BARNETT: I have copies,  
15:47:26 19 sorry.

15:47:32 20 Q. Let me give you a color copy  
15:47:34 21 instead of mine. Are those the lifting  
15:47:43 22 rings in that picture? Are those  
15:47:45 23 lifting rings in that picture?

15:47:47 24 MR. SUH: I'm sorry, is the  
15:47:48 25 representation this is the same

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15:47:50 2 instrument or not?

15:47:51 3 MR. BARNETT: This is not  
15:47:52 4 the same instrument.

15:47:53 5 Q. I'm just asking --

15:47:55 6 MR. RIVKIN: What is it a  
15:47:56 7 photo of?

15:47:56 8 Q. Let me ask simply. Isn't  
15:47:59 9 that the instrument on which you  
15:48:00 10 performed the majority of the work in  
15:48:01 11 your Ph.D. thesis in Dr. Brenna's  
15:48:05 12 laboratory?

15:48:05 13 A. Yes, it's not clear to me  
15:48:06 14 that it is.

15:48:07 15 Q. Do you recognize the Wiley  
15:48:14 16 E. Coyote cartoon figure as something  
15:48:15 17 you put there when you were a graduate  
15:48:17 18 student?

15:48:17 19 A. I do remember that, but I  
15:48:20 20 don't remember -- well, it's been a  
15:48:22 21 long time.

15:48:24 22 Q. Fair enough. So would you  
15:48:25 23 disagree with Dr. Brenna's -- go ahead.

15:48:29 24 A. I'm not sure if those  
15:48:30 25 lifting rings can be removed. One

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15:48:32 2 issue with regard to the lifting rings  
15:48:34 3 is assessing the instrument and if the  
15:48:37 4 lifting rings weren't intended to be  
15:48:39 5 removed, you certainly evaluate the  
15:48:42 6 instrument and make sure that it meets  
15:48:45 7 its specifications. Another thing that  
15:48:46 8 affects it is the design of the magnet  
15:48:48 9 and whether or not fringe fields would  
15:48:51 10 be affected. So I think that also is  
15:48:55 11 important. So I trust Simon's  
15:49:02 12 commentary that if the lifting rings  
15:49:03 13 are supposed to be removed from that  
15:49:05 14 magnet and that it would affect the  
15:49:08 15 performance of that instrument, then I  
15:49:11 16 agree with him.

15:49:13 17 Q. But as to this instrument  
15:49:14 18 which Dr. Brenna will represent that  
15:49:16 19 you performed the majority of your  
15:49:17 20 thesis work on, you don't think it was  
15:49:22 21 a problem that the lifting rings were  
15:49:23 22 on that instrument?

15:49:24 23 A. We didn't notice a problem.

15:49:41 24 THE PRESIDENT: Mr. Barnett,  
15:49:42 25 if you wish to have this photograph in



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15:49:44 2 the record I wish you would retain it  
15:49:46 3 until Dr. Brenna comes along and then  
15:49:49 4 establish the photograph and it can go  
15:49:52 5 in the record.

15:49:53 6 MR. BARNETT: Thank you. I  
15:49:54 7 have nothing further.

15:49:56 8 THE PRESIDENT: Mr. Suh.

15:49:57 9 REDIRECT EXAMINATION

15:49:59 10 BY MR. SUH:

15:49:59 11 Q. Dr. Goodman, you were asked  
15:50:01 12 a number of questions about your  
15:50:03 13 declaration and how it came to be  
15:50:07 14 prepared?

15:50:07 15 A. Yes.

15:50:07 16 Q. Let me ask you, how much  
15:50:13 17 time did you spend reviewing the  
15:50:15 18 declaration and its contents?

15:50:16 19 A. Many hours.

15:50:17 20 Q. Did you send notes and  
15:50:21 21 drafts and portions of it back and  
15:50:22 22 forth between consulting experts in  
15:50:29 23 that preparation process?

15:50:30 24 A. Yes, I did.

15:50:35 25 Q. And did you provide to the

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15:50:36 2 consulting experts -- well, first, did  
15:50:39 3 you also have numerous telephone calls  
15:50:41 4 with those consulting experts?

15:50:42 5 A. Yes, I did.

15:50:43 6 Q. Did your comments that you  
15:50:44 7 provided with respect to your  
15:50:46 8 declaration, were they all incorporated  
15:50:49 9 within the declaration?

15:50:50 10 A. Yes, they were.

15:50:51 11 Q. Was there ever a time when a  
15:50:53 12 comment that you wished to be  
15:50:54 13 incorporated in the declaration was not  
15:50:58 14 incorporated?

15:50:58 15 A. No.

15:51:01 16 Q. And aside from the issues  
15:51:03 17 that were raised here during cross  
15:51:07 18 examination today, do you affirm the  
15:51:10 19 contents of the declaration?

15:51:11 20 A. Yes, I do.

15:51:12 21 Q. And are you -- more  
15:51:16 22 importantly, are you fundamentally  
15:51:18 23 secure in your conclusion about the  
15:51:19 24 validity and accuracy of the IRMS test  
15:51:22 25 results in this case?

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15:51:22 2 A. Sorry, say that again.

15:51:24 3 Q. Are you secure, do you feel  
15:51:27 4 confident now, at this point, in your  
15:51:33 5 conclusions about the accuracy and  
15:51:35 6 validity of the IRMS test results in  
15:51:37 7 this case?

15:51:37 8 A. Yes, I do.

15:51:40 9 MR. SUH: Nothing further.

15:51:42 10 MR. BARNETT: I do have one  
15:51:43 11 brief follow-up, if I may.

15:51:45 12 RECROSS EXAMINATION

15:51:47 13 BY MR. BARNETT:

15:51:47 14 Q. Would you look at paragraph  
15:51:48 15 20 of your witness statement which is  
15:51:50 16 on Page 9, and I'm specifically  
15:51:52 17 interested in the carryover paragraph,  
15:51:55 18 so it's the first two sentences at the  
15:51:57 19 top of Page 10, if we could bring those  
15:52:00 20 up.

15:52:07 21 THE PRESIDENT: Is this one  
15:52:08 22 of the matters that was going into your  
15:52:10 23 list?

15:52:10 24 MR. BARNETT: This is a  
15:52:11 25 slight amendment to that matter.

1 KEITH GOODMAN - RECROSS

15:52:15 2 THE PRESIDENT: Well, I have  
15:52:16 3 to say this, I don't want to get into  
15:52:18 4 the situation where we have further  
15:52:22 5 examination after the reexamination  
15:52:24 6 because once we start that practice it  
15:52:26 7 will become endemic and we'll be here  
15:52:29 8 for weeks and weeks.

15:52:30 9 MR. BARNETT: Fair enough.  
15:52:31 10 This relates specifically to Mr. Suh's  
15:52:34 11 questions about the process and I only  
15:52:35 12 have one question.

15:52:37 13 THE PRESIDENT: All right.  
15:52:38 14 If it's more than one you will be  
15:52:41 15 expelled from the room.

15:52:44 16 MR. BARNETT: You realize  
15:52:45 17 that's tempting with as little sleep as  
15:52:48 18 I've had.

15:52:53 19 Q. To make sure I don't violate  
15:52:57 20 that, let me read it into the record,  
15:52:59 21 which says "Maurice, measurement  
15:53:01 22 variability is precision not accuracy.  
15:53:03 23 I tried to maintain proper scientific  
15:53:06 24 definitions while keeping your point  
15:53:08 25 largely intact." My question is did

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15:53:11 2 you find yourself in the uncomfortable  
15:53:13 3 position of having to tailor your  
15:53:15 4 opinions to the brief that had already  
15:53:17 5 been written in November?

15:53:18 6 A. Not at all. We discussed it  
15:53:20 7 and if there was an objection that I  
15:53:24 8 had I would correct it.

15:53:26 9 MR. BARNETT: Nothing  
15:53:26 10 further.

15:53:34 11 THE PRESIDENT: I just have  
15:53:34 12 one question. I wasn't sure to whom  
15:53:37 13 you were referring when Mr. Suh was  
15:53:41 14 reexamining when you referred to  
15:53:45 15 consulting experts. Remember he said  
15:53:48 16 did you discuss this brief with  
15:53:50 17 consulting experts?

15:53:51 18 THE WITNESS: Oh, members of  
15:53:54 19 the -- other expert witnesses on the  
15:53:56 20 team.

15:53:56 21 THE PRESIDENT: I see. Not  
15:53:58 22 the lawyers?

15:53:59 23 THE WITNESS: Oh -- oh,  
15:54:00 24 telephone calls?

15:54:03 25 THE PRESIDENT: Well, I

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15:54:05 2 don't mind at all if you talk to the  
15:54:07 3 lawyers, but I just want to be clear on  
15:54:08 4 what is encompassed by the consulting  
15:54:10 5 experts. Is it the lawyers and other  
15:54:13 6 experts?

15:54:13 7 THE WITNESS: Yes, it was  
15:54:14 8 the group.

15:54:15 9 THE PRESIDENT: The group,  
15:54:16 10 okay. Thanks. That's all. Thank you  
15:54:18 11 very much.

15:55:02 12 Mr. Barnett, may we inquire  
15:55:04 13 of you as to what we might usefully do  
15:55:07 14 this afternoon since we have still an  
15:55:10 15 hour or so to go. Are there any of the  
15:55:11 16 witnesses or so here available who  
15:55:13 17 would be able to testify today?

15:55:15 18 MR. BARNETT: Yes. As we  
15:55:16 19 indicated yesterday, Cynthia Mongongu  
15:55:20 20 would be our first witness if we got to  
15:55:23 21 this point.

15:55:24 22 THE PRESIDENT: Very good.  
15:55:25 23 Why don't we just take our afternoon  
15:55:27 24 break and we can get her settled and  
15:55:29 25 then we'll proceed.

1

15:57:07 2 (A recess was taken.)

16:10:43 3 THE PRESIDENT: Mr. Dunn,

16:17:36 4 are you ready to proceed?

16:17:38 5 MR. DUNN: I am.

16:17:42 6 THE PRESIDENT: Mr. Paulsson

16:17:43 7 is going to assist with the next group

16:17:45 8 of witnesses.

16:17:50 9 MR. PAULSSON:

16:18:16 10 THE INTERPRETER: Do you

16:18:16 11 promise that the testimony that you

16:18:18 12 give will be accurate and truthful.

16:18:20 13 MS. MONGONGU: Yes.

16:18:23 14 MR. PAULSSON: Under penalty

16:18:24 15 of perjury?

16:18:25 16 MS. MONGONGU: Yes.

16:18:27 17 MR. PAULSSON: The way in

16:18:28 18 which we're going to proceed today is

16:18:29 19 as follows: First of all, the lawyers

16:18:37 20 who ask you to come here will ask you a

16:18:40 21 few questions, if they wish. Then you

16:18:44 22 will be cross examined by the other

16:18:46 23 side. And you may then have further

16:18:54 24 questions from the lawyers who asked

16:18:55 25 you to appear. At this stage the panel

1 CYNTHIA MONGONGU - DIRECT

16:19:05 2 also might have questions for you  
16:19:06 3 possibly.

16:19:18 4 So at the end of that the  
16:19:22 5 panel may also possibly have some  
16:19:24 6 questions for you. And these questions  
16:19:31 7 might also in their turn lead to other  
16:19:33 8 questions from the lawyers. We shall  
16:19:35 9 see. That's how we'll go.

10 D I A N A C L A R K,  
11 called as the interpreter in this  
12 action, was sworn by the President, to  
13 accurately and faithfully interpret the  
14 questions propounded to the witness  
15 from English into French and the  
16 answers given by the witness from  
17 French into English.

18 C Y N T H I A M O N G O N G U,  
19 called as a witness on behalf of the  
20 Respondent, having been first duly  
21 affirmed by the Arbitrator (Jan  
22 Paulsson), was examined and testified  
23 through the interpreter as follows:

24 DIRECT EXAMINATION

16:19:46 25 BY MR. DUNN:



1 CYNTHIA MONGONGU - DIRECT

16:19:46 2 Q. Welcome, Ms. Mongongu.

16:19:47 3 A. Thank you.

16:19:48 4 Q. You have submitted both a

16:19:50 5 witness statement and a rebuttal

16:19:51 6 witness statement to this panel?

16:20:02 7 A. Yes.

16:20:03 8 Q. Are they both truthful and

16:20:06 9 accurate?

16:20:10 10 A. Yes, they are.

16:20:15 11 MR. DUNN: Thank you. No

16:20:20 12 further questions.

16:20:24 13 CROSS EXAMINATION

16:20:26 14 BY MR. SUH:

16:20:26 15 Q. Good afternoon. I'd like to

16:20:28 16 turn your attention to your declaration,

16:20:32 17 Page 5, where it says "IRMS peak

16:20:36 18 identification." And I'd like to show on

16:20:50 19 the screen and also read to you what it

16:20:53 20 says. It says "To identify IRMS

16:21:00 21 chromatographic peaks, the GC/MS

16:21:03 22 chromatographic patterns are compared to

16:21:05 23 those obtained by IRMS, elution order and

16:21:08 24 relative peak intensity, and the

16:21:10 25 retention times and relative retention

1 CYNTHIA MONGONGU - CROSS

16:21:13 2 times of each of the compounds of  
16:21:15 3 interest are compared to those known and  
16:21:17 4 obtained for the blank urine."

16:21:20 5 MR. DUNN: Excuse me, Mr.  
16:21:21 6 Suh, we don't have the relevant  
16:21:23 7 testimony up there. She doesn't have  
16:21:26 8 her statements with her. Mr. Suh, if  
16:21:48 9 it's okay with you and the panel she  
16:21:50 10 will have her English translation and  
16:21:54 11 the original French in case she wants  
16:21:57 12 to refer to either.

16:21:59 13 MR. SUH: That's fine.

16:22:17 14 A. I think I need you to repeat  
16:22:19 15 the portion of the end of your  
16:22:20 16 question, Mr. Suh.

16:22:21 17 Q. I was just drawing your  
16:22:24 18 attention to the first sentence  
16:22:26 19 underneath "IRMS peak identification"  
16:22:28 20 that begins "To identify IRMS  
16:22:31 21 chromatographic peaks" all the way down  
16:22:35 22 to the words "blank urine."

16:23:05 23 A. Yes.

16:23:06 24 Q. So your explanation about  
16:23:09 25 how IRMS peak identification is

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16:23:12 2 conducted is that first you compare  
16:23:15 3 peak patterns between GC/MS and IRMS;  
16:23:19 4 is that correct?

16:23:20 5 A. Yes, first of all, we do an  
16:23:45 6 identification using GC/MS. And the  
16:23:59 7 next thing we do is using the IRMS we  
16:24:02 8 do a comparison between the pattern and  
16:24:10 9 the chromatographic profile.

16:24:15 10 Q. And this method is a method  
16:24:18 11 you use every single time you perform a  
16:24:20 12 carbon isotope ratio test; is that  
16:24:29 13 correct?

16:24:29 14 A. Yes, this method is used for  
16:24:39 15 every single test of that type that we  
16:24:41 16 do.

16:24:41 17 Q. And how long have you been  
16:24:45 18 using this method with the IRMS and  
16:24:52 19 GC/MS pattern matching first followed  
16:24:55 20 by matching of the -- or comparison of  
16:25:00 21 retention time and relative retention  
16:25:02 22 time between the IRMS and the blank  
16:25:03 23 urine?

16:25:07 24 A. Ever since I started working  
16:25:36 25 on IRMS.

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16:25:38 2 Q. Thank you.

16:25:39 3 A. That is to say since  
16:25:45 4 February of 2003.

16:25:46 5 Q. And what does your SOP about  
16:25:52 6 peak matching say?

16:26:02 7 MR. DUNN: Excuse me, can we  
16:26:04 8 get the SOP to the witness so she can  
16:26:06 9 answer the question with the document.

16:26:11 10 MR. SUH: We've never been  
16:26:12 11 provided with an SOP on peak matching.

16:26:19 12 A. The SOP on the  
16:26:35 13 identification of GC/MS -- GC/MS and  
16:26:40 14 then the SOP on, on the analysis on the  
16:26:51 15 IRMS analysis. We have an SOP for  
16:26:58 16 GC/MS and we have an SOP for IRMS  
16:27:00 17 analysis.

16:27:00 18 Q. That's not my question. My  
16:27:02 19 question is tell us what the SOP on how  
16:27:04 20 you conduct peak matching, what it  
16:27:07 21 says? What does your SOP about peak  
16:27:10 22 matching say? How does it say you do  
16:27:11 23 it?

16:27:11 24 A. There is no SOP for the  
16:27:25 25 matching test. But the IRMS testing is

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16:27:34 2 done with the same chromatographic column  
16:27:39 3 and we do a GC/MS identification. The  
16:27:45 4 procedure and the order is the same for  
16:27:47 5 the IRMS. The retention times of the  
16:27:57 6 compounds that we analyze --

16:27:59 7 Q. I'm sorry, my question  
16:28:01 8 wasn't really about blank urine yet,  
16:28:03 9 retention time matching. My question  
16:28:04 10 is about the first step that you say is  
16:28:08 11 your compound identification step and I  
16:28:12 12 want to know, my question was whether  
16:28:15 13 or not there was an SOP or what your  
16:28:18 14 SOP says about how you conduct peak  
16:28:20 15 matching.

16:28:21 16 Am I correct to understand  
16:28:22 17 that there is no SOP on how to conduct  
16:28:25 18 peak matching?

16:28:53 19 A. There is no SOP for this  
16:28:58 20 matching.

16:28:58 21 Q. So your method therefore for  
16:29:02 22 peak matching is not validated,  
16:29:05 23 correct?

16:29:09 24 A. No, it's not correct. The  
16:29:15 25 method is validated.

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16:29:16 2 Q. And who validated the  
16:29:18 3 method?

16:29:18 4 A. I personally did validation  
16:29:25 5 of this method.

16:29:26 6 Q. So you validated your own  
16:29:29 7 method?

16:29:30 8 A. When you say my own methods,  
16:29:39 9 I'm talking about the methods that are  
16:29:40 10 used in the lab and yes, I validate  
16:29:42 11 those methods.

16:29:43 12 Q. And what do you mean by  
16:29:45 13 validate in this context?

16:29:47 14 A. When I validate this method  
16:30:05 15 I did analysis of several urines which  
16:30:11 16 I analyzed using GC/MS with the  
16:30:18 17 temperature program that's used with  
16:30:19 18 GC/MS and the temperature program used  
16:30:26 19 with IRMS to see if the two match.

16:30:28 20 Q. Have you validated this  
16:30:30 21 method with anyone outside of LNDD?

16:30:42 22 A. I don't know what you mean  
16:30:46 23 by on the outside.

16:30:48 24 Q. Has anyone validated that  
16:30:50 25 method who is not working for LNDD?

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16:30:53 2 A. I am the person who verifies  
16:31:00 3 the method.

16:31:01 4 Q. And you validated that  
16:31:02 5 method when you were an employee of  
16:31:05 6 LNDD, correct?

16:31:07 7 A. Absolutely, yes.

16:31:11 8 Q. That method is not accredited  
16:31:13 9 or part of your accreditation, is it,  
16:31:16 10 peak matching?

16:31:18 11 A. Yes, it is part of the  
16:31:30 12 accreditation.

16:31:30 13 Q. And your accreditation, you  
16:31:34 14 are saying that your IRMS accreditation  
16:31:37 15 included peak matching; is that  
16:31:40 16 correct?

16:31:40 17 A. Yes, contrary to what I told  
16:31:54 18 you before.

16:31:55 19 MR. PAULSSON: No, no. In  
16:31:58 20 accordance or through what I told you  
16:32:00 21 before.

16:32:01 22 A. In accordance with what I  
16:32:03 23 told you before.

16:32:04 24 THE INTERPRETER: Excuse me.

16:32:05 25 Q. And you are saying it is

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16:32:06 2 accredited notwithstanding the fact  
16:32:08 3 that there is no SOP on peak matching?

16:32:20 4 A. Yes.

16:32:21 5 Q. Your testimony is you use  
16:32:26 6 peak matching every time you conduct  
16:32:31 7 the IRMS test, correct?

16:32:33 8 A. Yes, as well as the blank  
16:32:48 9 urine testing comparison.

16:32:50 10 Q. We're going to get to the  
16:32:51 11 blank urine testing. I'm just talking  
16:32:53 12 about peak and pattern matching first.  
16:32:57 13 You use that every single time,  
16:32:59 14 correct?

16:33:00 15 A. Yes, but that's not the only  
16:33:07 16 thing that allows us to identify the  
16:33:09 17 peaks. You cannot look at that on its  
16:33:12 18 own.

16:33:13 19 Q. I'd like to show you what is  
16:33:16 20 Exhibit 88, LNDD 1062. I would actually  
16:33:49 21 like to just show her what's on the  
16:33:51 22 screen and I'll explain credit in a  
16:33:53 23 minute.

16:33:54 24 MR. DUNN: Can we get the  
16:33:55 25 entire document in front of her so she



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16:33:57 2 has the context.

16:33:59 3 MR. SUH: Let me explain to  
16:34:01 4 the panel --

16:34:01 5 THE PRESIDENT: Excuse me,  
16:34:02 6 just let the translator finish the last  
16:34:05 7 question.

16:34:12 8 THE INTERPRETER: I think  
16:34:12 9 you said that she wanted to see what's  
16:34:14 10 on the screen, you wanted to see what's  
16:34:16 11 on the screen?

16:34:18 12 MR. SUH: I'd like to be  
16:34:19 13 able to show the witness just the GC/MS  
16:34:23 14 chromatogram and just the GC/C/IRMS  
16:34:32 15 chromatogram so she can show us how she  
16:34:34 16 does the pattern matching and thereby  
16:34:36 17 identify the isotopes. If you show her  
16:34:39 18 the entire page what you will get is  
16:34:41 19 the data below where they say what the  
16:34:43 20 peaks are. So then it suggests the  
16:34:45 21 answer. This is actually to inquire  
16:34:48 22 whether, to have her demonstrate how  
16:34:51 23 she does it. Because when she actually  
16:34:53 24 generates the chromatogram it's not  
16:34:55 25 going to have that information.

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16:35:01 2 THE PRESIDENT: Excuse me.

16:35:26 3 MR. RIVKIN: Can we ask a  
16:35:28 4 clarifying question?

16:35:30 5 MR. SUH: Sure.

16:35:30 6 MR. RIVKIN: When you reviewed  
16:35:31 7 the chromatogram are you simply looking  
16:35:39 8 at the chart that shows the peaks or are  
16:35:46 9 you looking at the chart with numerical  
16:35:48 10 data underneath or otherwise with the  
16:35:58 11 chromatogram?

16:36:07 12 THE WITNESS: Yes, I look at  
16:36:10 13 the chart as well as the information I  
16:36:15 14 have on retention times.

16:36:22 15 MR. PAULSSON: The numbers  
16:36:23 16 on -- the numbers underneath the chart?

16:36:27 17 THE WITNESS: Yes, we look  
16:36:44 18 at -- we look at the chart with one  
16:36:47 19 range down the side and one range at  
16:36:49 20 the bottom with numbers.

16:36:50 21 MR. RIVKIN: And that's when  
16:36:51 22 you do your peak matching with that  
16:36:53 23 information in front of you?

16:37:05 24 THE WITNESS: Yes, with the  
16:37:06 25 numbers and the peaks that are shown on

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16:37:07 2 the chart.

16:37:08 3 MR. SUH: Just for the  
16:37:09 4 record, it's different what we heard  
16:37:12 5 about what the process was in the  
16:37:13 6 opening. But that's fine. If that's  
16:37:15 7 the testimony, let's have both LNDD  
16:37:18 8 1062 and 1085 put up on the screen.

16:38:04 9 Perhaps the panel could  
16:38:05 10 inquire of the witness a clarifying  
16:38:07 11 question of exactly what data she's  
16:38:10 12 looking at when she does this, because  
16:38:12 13 there is data in there that identifies  
16:38:14 14 the peaks that is my understanding not  
16:38:16 15 the data that is available at the time  
16:38:20 16 that you would have the pattern  
16:38:23 17 matching conducted.

16:38:56 18 MR. RIVKIN: Mr. Suh, it  
16:38:58 19 seems that you could show her the  
16:38:59 20 chromatograph with the data and say is  
16:39:01 21 this the same data that you're looking  
16:39:04 22 at when you look on the screen or is  
16:39:05 23 this different data than what you're  
16:39:08 24 looking at on the screen.

16:39:09 25 MR. DUNN: I'm sorry to

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16:39:11 2 interrupt, but would it be better to  
16:39:12 3 show her one of the chromatograms and  
16:39:15 4 data from the actual analysis?

16:39:20 5 MR. SUH: We will. We will  
16:39:21 6 show her that. But this is their  
16:39:24 7 described method of how she does it.  
16:39:26 8 And it should work all the time, not  
16:39:29 9 just --

16:39:29 10 MR. RIVKIN: I think you  
16:39:30 11 should show her whatever. She said she  
16:39:33 12 looks at data and the chart. If you  
16:39:34 13 think it's different data than what's  
16:39:37 14 on your document, why don't you show it  
16:39:39 15 to her and ask her if it's the same  
16:39:41 16 data or a different type of data.

16:39:43 17 MR. SUH: That's fair.

16:39:45 18 MR. YOUNG: Could we have a  
16:39:47 19 clarification from the panel to the  
16:39:48 20 witness that what she's looking at --  
16:39:50 21 she looks at a computer screen, the  
16:39:52 22 pieces of paper she's looking at are  
16:39:54 23 the same things she looks at on a  
16:39:56 24 computer screen?

16:39:57 25 MR. RIVKIN: I think that's

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16:39:59 2 for her to say whether it's the same  
16:40:00 3 thing that she's looking at or not.

16:40:19 4 THE PRESIDENT: Mr. Suh, I  
16:40:20 5 think we're in your hands, that you  
16:40:21 6 should ask the questions. If you --  
16:40:23 7 let me just say this. If you want a  
16:40:25 8 break to talk to your client before we  
16:40:28 9 proceed, tell us that.

16:40:34 10 MR. SUH: I think our  
16:40:35 11 computer system is not up anyway, so  
16:40:37 12 why don't we take a break.

16:40:39 13 THE PRESIDENT: Fine. We're  
16:40:44 14 taking a five minute break.

16:41:06 15 (A recess was taken.)

16:48:54 16 THE PRESIDENT: Mr. Suh, are  
16:48:58 17 you ready to proceed?

16:49:00 18 MR. SUH: Yes, we are ready.

16:49:07 19 BY MR. SUH:

16:49:36 20 Q. Let's proceed. Ms.  
16:49:42 21 Mongongu, you testified that with  
16:49:46 22 respect to peak matching that peak  
16:49:51 23 matching is the first step. Would LNDD  
16:49:57 24 just use peak matching alone all by  
16:50:00 25 itself as a method?

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16:50:07 2 A. No, not peak matching alone.

16:50:23 3 Q. And why would you not use  
16:50:25 4 peak matching alone as a method?

16:50:34 5 A. Because in labs we do a  
16:50:44 6 second testing procedure.

16:50:49 7 MR. PAULSSON: With the  
16:50:50 8 blank urine for the relevant  
16:51:01 9 metabolites.

16:51:03 10 A. With the blank urine for the  
16:51:07 11 relevant metabolites.

16:51:08 12 Q. Is that because peak  
16:51:10 13 matching alone would be too unreliable  
16:51:11 14 as a method for identification?

16:51:42 15 A. No, I don't think so. In  
16:51:43 16 fact, there are many IRMS procedures  
16:51:45 17 that are used and between IRMS and  
16:51:48 18 GC/MS. The most important thing is to  
16:51:58 19 identify the molecules by GC/MS.

16:52:07 20 Q. When you say identify the  
16:52:09 21 molecules by GC/MS, what do you mean?

16:52:13 22 A. Well, by identify means to  
16:52:22 23 establish whether they are present in  
16:52:24 24 the product, in the matter being  
16:52:27 25 analyzed.

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16:52:30 2 MR. PAULSSON: Fractions.

16:52:31 3 A. In the fractions being  
16:52:32 4 analyzed.

16:52:32 5 Q. It is correct to say that  
16:52:33 6 peak matching alone would not be  
16:52:35 7 sufficiently reliable as a method for  
16:52:37 8 identification of testosterone  
16:52:38 9 metabolites, correct?

16:53:09 10 A. Well, I don't know. There's  
16:53:13 11 a great deal in the literature about  
16:53:15 12 these two IRMS and GC/MS. I don't  
16:53:21 13 know.

16:53:21 14 Q. Your testimony is that there  
16:53:23 15 is a great deal in the literature about  
16:53:25 16 peak matching?

16:53:37 17 A. I'm saying that it's not  
16:53:44 18 uncommon to use a trace from IRMS and  
16:53:47 19 GC/MS to compare the two -- to arrive  
16:53:51 20 at an analysis.

16:53:52 21 MR. PAULSSON: By using the  
16:53:53 22 peak.

16:53:54 23 A. By using the peak.

16:53:55 24 Q. Your testimony is that there  
16:53:56 25 is a great deal in the literature about

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16:53:59 2 this method; is that correct?

16:54:04 3 A. I'm repeating to you what I  
16:54:26 4 said before which is that it's not  
16:54:27 5 uncommon to see these two methods used  
16:54:33 6 through my professional experience and  
16:54:41 7 I think because I have worked on this  
16:54:43 8 that it's normal. People who do IRMS  
16:54:48 9 analysis --

16:54:51 10 Q. There are no -- sorry.

16:55:00 11 A. Yes, among people who do the  
16:55:03 12 IRMS analysis.

16:55:04 13 Q. Can you identify any  
16:55:06 14 peer-reviewed article that talks about  
16:55:09 15 peak matching as a validated method for  
16:55:12 16 identification of metabolites?

16:55:23 17 A. No, I don't right off the  
16:55:39 18 top of my head have knowledge of any  
16:55:41 19 such article.

16:55:42 20 Q. I'd like to show you now  
16:55:45 21 LNDD 681 and LNDD 0702 in Exhibit 84.  
16:56:00 22 For the record, these are the GC/MS and  
16:56:02 23 matching IRMS chromatograms for  
16:56:11 24 sample --

16:56:11 25 A. Could you give me those



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16:56:12 2 references again, please.

16:56:13 3 Q. 1062 and 1085, LNDD 1062 and  
16:56:23 4 1085.

16:57:06 5 MR. SUH: I think that's not  
16:57:07 6 the right one you have up on the  
16:57:08 7 screen. Exhibit 84, LNDD 0702 and LNDD  
16:57:23 8 0681. The numbers are 0681, LNDD 0681  
16:57:38 9 and LNDD 0702.

16:58:04 10 MR. DUNN: Do you have both?

16:58:07 11 THE WITNESS: No.

16:58:48 12 Q. Looking at these two  
16:58:49 13 chromatograms, can you show how you  
16:58:51 14 would use your peak matching technique  
16:58:57 15 to identify the testosterone  
16:58:59 16 metabolites.

16:59:08 17 A. I need to be absolutely sure  
16:59:21 18 that the chromatogram that's below is  
16:59:24 19 the same one, it corresponds.

16:59:29 20 MR. DUNN: We would object at  
16:59:31 21 this point because these chromatograms  
16:59:33 22 are not of the same sample or fraction.

16:59:37 23 MR. SUH: Excuse me. Hold  
16:59:39 24 on. Let me see whether or not we have  
16:59:42 25 to check to see if we have the right

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16:59:44 2 one.

16:59:45 3 MR. DUNN: And while they're  
16:59:47 4 checking, it's clear from the sample  
16:59:49 5 name on this sheet, 681, that it's --

16:59:55 6 MR. SUH: Yes, you're right,  
16:59:56 7 you're right. Hold on.

17:00:04 8 MR. YOUNG: One's a sample,  
17:00:05 9 the other is a blank urine.

17:00:08 10 MR. SUH: Right. While  
17:00:26 11 we're trying to lay these up side by  
17:00:28 12 side, why don't I move on to some other  
17:00:30 13 questions.

17:00:38 14 Q. Let's turn to your retention  
17:00:44 15 time, the second step, the retention  
17:00:46 16 time to relative retention time  
17:00:50 17 analysis for blank urine.

17:00:53 18 So your testimony is now  
17:01:16 19 that you compare the -- you compare  
17:01:22 20 retention time and relative retention  
17:01:24 21 time as against studied analytes in  
17:01:30 22 blank urine; is that right?

17:01:32 23 A. Yes, that's correct.

17:01:48 24 Q. And can you explain  
17:01:53 25 precisely how you do that?

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17:01:55 2 A. May I show you some  
17:02:02 3 documents?

17:02:03 4 Q. Yes.

17:02:20 5 MR. DUNN: You can use the  
17:02:21 6 doc packs too if you'd like.

17:02:55 7 A. I'm sorry, I'm just trying  
17:02:56 8 to look this up.

17:03:00 9 MS. SLOAN: I'll give you  
17:03:01 10 the official one. Are you looking at A  
17:03:07 11 or B?

17:03:08 12 THE WITNESS: A.

17:03:28 13 A. Yes, I found it. Page USADA  
17:03:37 14 0185.

17:03:45 15 MS. SLOAN: I'm sorry, it's  
17:03:47 16 Exhibit 24.

17:03:51 17 MR. BARNETT: We're in  
17:03:52 18 Exhibit 24, panel.

17:04:12 19 A. So after making the  
17:04:16 20 identification using the chromatograph  
17:04:20 21 technique, and to the different values  
17:04:25 22 and the different blank boxes, and I  
17:04:30 23 start, for example, with the blank  
17:04:31 24 urine and I put the product retention  
17:04:38 25 time and then that allows me to

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17:04:44 2 calculate the relative retention time.

17:04:49 3 I do the same thing for the sample.

17:05:09 4 So there you are for the

17:05:10 5 first step, you have the blanks there

17:05:16 6 so this is for the 11 keto. Then I put

17:05:37 7 in the retention time that we obtained

17:05:45 8 and then by comparing it with the

17:05:47 9 standard retention time I get the

17:05:50 10 relative retention time. I do the same

17:05:57 11 for all the molecules that we're

17:06:00 12 interested in, for all the other

17:06:02 13 columns, andro and for 5-beta diol and

17:06:23 14 5-alpha diol. I do the same thing for

17:06:29 15 the sample. And then I compare the

17:06:38 16 retention times for the urine, for the

17:06:41 17 blank urine and for the sample. And

17:06:45 18 that way I'm sure that I'm looking at

17:06:47 19 the right item, the right product.

17:06:49 20 Q. Now, what does the SOP say

17:06:54 21 about how this method is conducted?

17:06:58 22 A. Well, what does the SOP say

17:07:29 23 about it. The SOP says that after

17:07:32 24 you've done the analysis you fill out

17:07:34 25 the log.

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17:07:38 2 Q. Do you have an SOP, does  
17:07:41 3 LNDD have an SOP on the blank urine,  
17:07:45 4 use of the blank urine and the use of  
17:07:48 5 the relative retention time technique  
17:07:50 6 or method to identify testosterone  
17:07:52 7 metabolites?

17:08:03 8 A. No.

17:08:15 9 Q. So there is no SOP on the  
17:08:18 10 use of blank urines for identification,  
17:08:22 11 correct?

17:08:25 12 A. Well, there is an SOP that  
17:08:44 13 exists because we use these blank  
17:08:47 14 urines for all our analyses. And for  
17:08:53 15 -- before using them for every IRMS  
17:08:56 16 analysis we have to characterize them.  
17:09:02 17 So we have to identify in each fraction  
17:09:06 18 what are the analyses of interest.

17:09:13 19 MR. PAULSSON: Analytes.  
17:09:15 20 Not analysis, analytes.

17:09:18 21 THE INTERPRETER: I beg your  
17:09:19 22 pardon.

17:09:19 23 Q. My question is much simpler,  
17:09:22 24 yes or no. Is there an SOP about the  
17:09:23 25 use of this method, the relative

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17:09:26 2 retention time method and the use of  
17:09:28 3 the blank urine to identify  
17:09:31 4 testosterone metabolites in your IRMS  
17:09:33 5 test?

17:09:54 6 A. No, there is no SOP.

17:09:55 7 Q. Has this method ever been  
17:09:58 8 accredited?

17:10:00 9 A. The IRMS analysis do you  
17:10:07 10 mean?

17:10:07 11 Q. No, the use of the method of  
17:10:10 12 using the relative retention time  
17:10:13 13 method and blank urine to identify  
17:10:16 14 testosterone metabolites, is that a  
17:10:19 15 method that has been accredited?

17:10:23 16 A. The method that was  
17:10:44 17 accredited in the lab includes  
17:10:51 18 identification by GC/MS and the  
17:10:57 19 measurement of isotopic values by IRMS.  
17:11:02 20 That method of identification has  
17:11:06 21 indeed been validated.

17:11:08 22 Q. My question is this: You're  
17:11:11 23 claiming that there is an accreditation  
17:11:14 24 for this method, this method meaning  
17:11:17 25 the method using relative retention

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17:11:21 2 time as against blank urine to identify  
17:11:25 3 testosterone metabolites; is that  
17:11:37 4 correct?

17:11:37 5 A. I really don't understand  
17:11:52 6 your question. It's the method that's  
17:11:54 7 used everywhere. The overall method  
17:12:09 8 has been approved by the auditors, so  
17:12:12 9 this part of it has also been approved.

17:12:15 10 Q. So this part of it was  
17:12:17 11 approved even though there's no SOP  
17:12:19 12 describing how it's done?

17:12:22 13 A. Well at the time of my  
17:12:44 14 accreditation the auditor saw all these  
17:12:46 15 documents when this method was being  
17:12:48 16 used and all of these documents are  
17:12:56 17 included in the documents that are used  
17:13:00 18 for accreditation.

17:13:01 19 MR. PAULSSON: I was there.

17:13:03 20 A. And I was present.

17:13:07 21 Q. Let me ask you this. You  
17:13:09 22 have said in your declaration  
17:13:11 23 underneath "Interpretation of WADA  
17:13:13 24 TD2003IDCR-FR," which is on Page 6 --  
17:14:07 25 all right, turning your attention to

1 CYNTHIA MONGONGU - CROSS

17:14:08 2 the bottom of your declaration, it  
17:14:11 3 says, I'll read from it, "Retention  
17:14:14 4 times and relative retention times  
17:14:17 5 obtained by GC/MS cannot and must not  
17:14:21 6 in any circumstances be compared with  
17:14:25 7 those obtained by IRMS considering the  
17:14:29 8 difference in instrumentation."

17:14:32 9 MR. SUH: Todd, that's RD  
17:14:35 10 15.22. I'm reading from her  
17:14:39 11 declaration.

17:15:20 12 A. Yes, I see that.

17:15:23 13 Q. So your testimony is that  
17:15:25 14 you cannot and must not use GC/MS  
17:15:28 15 against your IRMS, correct?

17:15:32 16 A. I'm talking about  
17:15:45 17 identification of peaks. For  
17:15:52 18 identification of peaks you can't use a  
17:15:54 19 comparison of retention time and relative  
17:15:56 20 retention time between GC/MS and IRMS.

17:16:03 21 Q. I'd like to show you now a  
17:16:04 22 portion of a transcript from the AAA  
17:16:08 23 panel.

17:16:09 24 MR. SUH: Todd, that is at  
17:16:11 25 Page 256 -- excuse me, 255, from Dr.



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17:16:21 2 Brenna's testimony. Actually, Todd, if  
17:16:27 3 you could just show the whole page  
17:16:30 4 first.

17:17:00 5 Q. And on that page if you see  
17:17:02 6 the beginning part of the page really  
17:17:09 7 at line 15 we're talking about 5-alpha  
17:17:11 8 and 5-beta and I asked a question of  
17:17:13 9 Dr. Brenna, "And how would I know which  
17:17:16 10 is which because they just have numbers  
17:17:18 11 at the top?" And I received an answer  
17:17:21 12 back, "Well, they have retention times  
17:17:23 13 that match on the previous -- with the  
17:17:25 14 previous GC/MS, and the GC/MS delivers  
17:17:28 15 structural information, like aliquots  
17:17:30 16 and so forth, that tell us which is  
17:17:32 17 which." And if you go to the top of  
17:18:13 18 that page at line 5 it's clear from the  
17:18:17 19 question there that we're talking about  
17:18:19 20 the parallel IRMS chromatogram where it  
17:18:22 21 says "But in any case, 173 is the GC  
17:18:27 22 combustion version of that same  
17:18:31 23 chromatogram, that same sample. Sorry,  
17:18:34 24 the GC combustion -- IRMS. Sorry.  
17:18:39 25 We've been calling it the IRMS, I

1 CYNTHIA MONGONGU - CROSS

17:18:42 2 apologize. The IRMS version of that."

17:19:10 3 In any case, you do not use

17:19:12 4 relative retention time between GC/MS

17:19:14 5 and GC IRMS; is that correct?

17:19:21 6 A. In fact, the document

17:19:32 7 TD2003IDCR-FR on identification of

17:19:39 8 molecules talk -- spoke about making a

17:19:47 9 comparison when they were on the same

17:19:49 10 instrument.

17:19:57 11 Q. That's not my question. My

17:19:58 12 question is in any case, you would

17:20:00 13 never use GC/MS comparison against

17:20:03 14 IRMS, correct?

17:20:06 15 A. I do what I am required to

17:20:23 16 do. So if I'm given a technical

17:20:30 17 document I'm told the identification

17:20:35 18 must be done using the same

17:20:38 19 instruments. And I do it on the same

17:20:41 20 instrument.

17:20:52 21 Q. When you said that the

17:20:55 22 documents were provided to COFRAC

17:20:58 23 during the accreditation process about

17:21:01 24 your method, if there is no SOP about

17:21:04 25 pattern matching and no SOP for the

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17:21:07 2 blank urine method, what documents did  
17:21:11 3 COFRAC receive and review?

17:21:14 4 A. In the validation report  
17:21:49 5 there were all -- they would all be --  
17:21:55 6 they were all the SOPs concerning these  
17:21:59 7 methods.

17:22:00 8 Q. But there was no SOP for  
17:22:02 9 pattern matching or for the blank urine  
17:22:05 10 method?

17:22:07 11 A. No.

17:22:11 12 Q. And you would agree that the  
17:22:13 13 identification of the proper  
17:22:15 14 testosterone metabolites is a truly  
17:22:17 15 critical portion of the carbon isotope  
17:22:26 16 ratio test, you have to be able to  
17:22:27 17 identify the correct metabolites,  
17:22:32 18 right?

17:22:34 19 A. The metabolites are  
17:22:53 20 correctly identified using that method.

17:22:56 21 Q. Let me turn your attention  
17:23:00 22 to manual integration or the manual  
17:23:05 23 integration process on the IsoPrime  
17:23:08 24 instrument. And first let me talk  
17:23:11 25 about the IsoPrime 1, the one that was

1 CYNTHIA MONGONGU - CROSS

17:23:18 2 used on sample 995474.

17:23:43 3 A. Okay.

17:23:44 4 Q. Describe to me what training  
17:23:59 5 you had on the manual integration  
17:24:02 6 process, the moving of the beginning  
17:24:06 7 and the end of peaks in a chromatogram.

17:24:29 8 A. I received training in this  
17:24:44 9 in 2003 when I was doing my internship  
17:24:51 10 studying this method by the analyst who  
17:25:01 11 had the position at the time at LNDD.

17:25:11 12 MR. PAULSSON: I think it  
17:25:13 13 was a name. At the laboratory.

17:25:29 14 Q. Now, describe to me how the  
17:25:33 15 -- how it is you decide when to  
17:25:39 16 manually integrate a peak?

17:25:42 17 A. When the analysis has been  
17:26:00 18 done, in order to make quite sure that  
17:26:09 19 the analysis was correctly done, but  
17:26:18 20 it's really at the peak not too far to  
17:26:21 21 the left, not too far to the right.

17:26:24 22 MR. PAULSSON: That the  
17:26:25 23 software didn't go too far.

17:26:32 24 A. It's to verify that the  
17:26:34 25 software did correctly integrate the

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17:26:36 2 peak.

17:26:37 3 Q. And how is it you know that  
17:26:39 4 you would know better where the peak  
17:26:42 5 starts and ends than the software?

17:26:45 6 A. Well, you know, for every  
17:27:00 7 analysis, whether it's a classic GC/MS  
17:27:03 8 analysis, sometimes it happens the  
17:27:08 9 software does not identify the peak  
17:27:10 10 correctly. And we as professionals are  
17:27:15 11 there to make sure that does not  
17:27:18 12 happen. So it's -- we have to verify  
17:27:22 13 that the peak is correctly integrated.

17:27:27 14 Q. So your testimony is that  
17:27:29 15 you use the software -- excuse me, you  
17:27:34 16 use manual integration or processing to  
17:27:38 17 help you correctly identify the peak?

17:27:49 18 A. I don't understand.

17:28:18 19 MR. SUH: Can we have a  
17:28:20 20 read-back of her last answer.

17:28:22 21 (Record read as requested.)

17:28:22 22 Q. Is that correct?

17:28:24 23 A. I'm talking about whenever  
17:28:28 24 we do a GC/MS analysis, not necessarily  
17:28:31 25 regarding -- a classic analysis. We

1 CYNTHIA MONGONGU - CROSS

17:28:42 2 verify that what we see is correct.

17:28:44 3 Q. And how do you know that the  
17:28:47 4 computer algorithm is incorrect when  
17:28:50 5 you make that judgment?

17:28:52 6 A. I look to see if the peak is  
17:29:14 7 not identified right in the middle.

17:29:17 8 Q. And how do you do that?  
17:29:20 9 What process?

17:29:25 10 MR. DUNN: I think the  
17:29:26 11 witness said integrated not identified.

17:29:33 12 MS. MARTINEZ LOPEZ: I think  
17:29:34 13 she said if the software did not  
17:29:36 14 integrate the peak right in the middle.

17:29:38 15 MR. DUNN: Let me finish the  
17:29:40 16 objection. That is a key distinction.  
17:29:43 17 Integration means the start and stops  
17:29:45 18 of peaks --

17:29:46 19 MR. SUH: I'd object to  
17:29:47 20 this. If there's an objection --

17:29:49 21 MR. DUNN: I object because  
17:29:50 22 the question and the translation was  
17:29:52 23 ambiguous.

17:29:57 24 THE PRESIDENT: Would you  
17:29:58 25 like to repeat the question, Mr. Suh.

1 CYNTHIA MONGONGU - CROSS

17:30:01 2 MR. SUH: Maybe I'll just  
17:30:02 3 have my question read back.

17:30:04 4 (Record read as requested.)

17:30:44 5 A. I said not integrated right  
17:30:47 6 in the middle.

17:30:49 7 Q. And how do you make that  
17:30:51 8 determination that it is not integrated  
17:30:53 9 right in the middle?

17:30:54 10 A. When I do a manual  
17:31:04 11 integration I look at my ratio.

17:31:09 12 MR. PAULSSON: Two to one  
17:31:10 13 ratio.

17:31:11 14 A. My two to one ratio.

17:31:13 15 THE INTERPRETER: Thank you.

17:31:14 16 Q. You're aware that when you  
17:31:15 17 change the start and stop of each peak  
17:31:19 18 it alters the isotopic value?

17:31:26 19 A. I know that when I make a  
17:31:40 20 manual adjustment I change -- I improve  
17:31:49 21 the correctness and the reliability of  
17:31:53 22 the results.

17:31:55 23 Q. When you make a manual  
17:31:59 24 adjustment to a peak start and stop,  
17:32:02 25 you are altering the isotopic value, or

1 CYNTHIA MONGONGU - CROSS

17:32:08 2 altering the isotopic calculation of  
17:32:11 3 that peak in question, correct? It's a  
17:32:14 4 yes or no question.

17:32:34 5 A. You're asking me if the  
17:32:39 6 isotopic value has changed? Yes.

17:32:42 7 Q. And how frequently --

17:32:48 8 THE INTERPRETER: She wanted  
17:32:49 9 to ask you do you mean is the isotopic  
17:32:52 10 value changed.

17:32:54 11 Q. Yes.

17:33:07 12 A. The fact of needing to  
17:33:16 13 verify the isotopic integration gives  
17:33:23 14 the isotopic value of the integrated  
17:33:26 15 product.

17:33:33 16 Q. I'll ask my question again.  
17:33:36 17 When you change the start and stop of  
17:33:39 18 each peak it will affect the isotopic  
17:33:43 19 calculation of the peak that you have  
17:33:45 20 changed, correct?

17:33:57 21 A. Yes.

17:33:57 22 Q. Now when the chromatogram  
17:33:59 23 shows more matrix interference, do you  
17:34:06 24 have to use more manual integration or  
17:34:08 25 less manual integration?



1 CYNTHIA MONGONGU - CROSS

17:34:10 2 A. Everything depends on the  
17:34:29 3 chromatogram that you have.

17:34:30 4 Q. And what would it depend  
17:34:31 5 upon?

17:34:32 6 A. Well it depends where the  
17:34:43 7 software put the integration. If it  
17:34:45 8 put it in the right spot, fine, if it  
17:34:47 9 didn't, I correct it.

17:34:48 10 Q. Isn't it true that it is  
17:34:49 11 more difficult to find the right spot  
17:34:52 12 when there is more matrix interference  
17:34:56 13 in the chromatogram?

17:34:58 14 A. When you look at the ratio  
17:35:26 15 you see the start and the end of the  
17:35:29 16 change in the peak.

17:35:30 17 Q. That's not my question. My  
17:35:34 18 question is --

17:35:37 19 MR. SUH: Why don't you read  
17:35:38 20 my question back.

17:35:39 21 (Record read as requested.)

17:36:07 22 A. Yes.

17:36:07 23 Q. And so you would have to do  
17:36:09 24 more manual integration when the  
17:36:10 25 quality of the chromatogram is poor,

1 CYNTHIA MONGONGU - CROSS

17:36:12 2 right?

17:36:14 3 A. Yes, I think so.

17:36:23 4 Q. How frequently do you  
17:36:25 5 perform manual integration in the  
17:36:29 6 laboratory?

17:36:30 7 A. Whenever it's necessary.

17:36:39 8 Q. Well let's talk about sample  
17:36:42 9 995474. You were the technician who  
17:36:53 10 worked on the A sample of 995474,  
17:36:58 11 correct?

17:36:58 12 A. Yes.

17:37:09 13 Q. And first let me ask you do  
17:37:14 14 you ever manually integrate the quality  
17:37:18 15 controls in a sequence? And by quality  
17:37:24 16 control I mean the Mix Cal Acetate, do  
17:37:30 17 you ever manually integrate those?

17:37:33 18 A. Yes.

17:37:53 19 Q. And why would you integrate,  
17:37:57 20 manually integrate quality control?

17:38:00 21 A. Well it's the same thing. I  
17:38:11 22 look to see if it's integrated the peak  
17:38:13 23 correctly, it hasn't gone too far, and  
17:38:23 24 if it's necessary then I reintegrate  
17:38:26 25 the peak.

1 CYNTHIA MONGONGU - CROSS

17:38:27 2 Q. And do you ever manually  
17:38:30 3 integrate the Mix Cal IRMS?

17:38:34 4 A. Yes.

17:38:40 5 Q. And you would agree of  
17:38:42 6 course that the Mix Cal IRMS and the  
17:38:45 7 Mix Cal Acetate are generally much  
17:38:50 8 cleaner chromatograms than the sample  
17:38:54 9 chromatograms?

17:38:55 10 A. Yes.

17:39:09 11 Q. For example, I'd like to  
17:39:21 12 show you Exhibit 26 which is LNDD 500.  
17:40:39 13 Do you see the chromatogram?

17:40:41 14 A. Yes.

17:40:41 15 Q. And this is a Mix Cal IRMS.  
17:40:49 16 And this is the kind of chromatogram  
17:40:50 17 that sometimes you would manually  
17:40:52 18 integrate, correct?

17:40:54 19 A. Yes.

17:40:59 20 Q. Did you manually integrate  
17:41:01 21 the Mix Cal IRMS in sample 995474?

17:41:11 22 A. I don't really -- I would  
17:41:23 23 have to look at it. I'm really not  
17:41:25 24 sure if I did or not. I'd have to  
17:41:27 25 look.

1 CYNTHIA MONGONGU - CROSS

17:41:27 2 Q. You'd have to look at what?

17:41:28 3 A. It does seem it was

17:42:51 4 integrated.

17:42:54 5 Q. And turning to your --

17:42:57 6 turning your attention to the Mix Cal

17:43:00 7 Acetate, you said you sometimes

17:43:01 8 manually integrate your Mix Cal

17:43:03 9 Acetate, correct?

17:43:04 10 A. Yes.

17:43:16 11 Q. The Mix Cal Acetate,

17:43:19 12 however, is used for the purpose of

17:43:25 13 determining accuracy of the instrument,

17:43:28 14 isn't that correct, of your IRMS

17:43:30 15 instrument?

17:43:34 16 A. Yes, it's used to check that

17:43:47 17 the instrumentation is correct.

17:43:48 18 Q. And when you say correct,

17:43:52 19 you mean it's accurate; is that right?

17:43:55 20 A. Yes, it's the same thing.

17:44:04 21 Q. And when you run a Mix Cal

17:44:19 22 Acetate you are determining whether or

17:44:21 23 not the substances injected into the

17:44:24 24 Mix Cal Acetate are measuring within a

17:44:27 25 certain specific isotopic range,

1 CYNTHIA MONGONGU - CROSS

17:44:30 2 correct?

17:44:54 3 THE INTERPRETER: I'm just  
17:44:55 4 repeating the question.

17:45:20 5 A. Yes.

17:45:21 6 Q. And those four substances  
17:45:24 7 are 5-androstanol AC, etiocholanolone  
17:45:30 8 AC, 5-beta androstane-3 $\alpha$ ,17 $\beta$ -diol diacetate and  
17:45:38 9 11 keto-etiocholanolone AC?

17:45:38 10 A. Yes.

17:46:07 11 Q. During the accreditation  
17:46:08 12 process for your IRMS method, did you  
17:46:12 13 inform the COFRAC accreditor that you  
17:46:16 14 manually reprocess your quality  
17:46:21 15 controls?

17:46:43 16 A. No.

17:46:56 17 MR. RIVKIN: Did they see  
17:46:58 18 you manually integrate the quality of  
17:46:59 19 the Mix Cal Acetate?

17:47:09 20 THE WITNESS: When they came  
17:47:10 21 to audit us they did indeed see us  
17:47:24 22 making those manual adjustments, but I  
17:47:30 23 don't know at this stage whether Mix  
17:47:32 24 Cal Acetate was in there.

17:47:35 25 Q. I'd like to turn your

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17:47:39 2 attention back to sample A, and I'm  
17:47:42 3 going into the fractions themselves and  
17:47:45 4 the blank urines. First of all, did  
17:47:48 5 you use manual integration on the blank  
17:47:52 6 urine F3?

17:47:56 7 A. We used manual integration  
17:48:23 8 on all the data.

17:48:26 9 Q. You used manual integration  
17:48:28 10 on -- when you say all the data you  
17:48:30 11 mean the blank F3, the F3, the blank  
17:48:33 12 F1, the F1, the blank F2 and the F2?

17:48:39 13 A. No, I mean on every kind of  
17:48:50 14 data, every type of data.

17:48:52 15 Q. I'm talking about sample  
17:48:55 16 995474, the sample in this case. Did  
17:48:58 17 you manually integrate the blank F3?

17:49:07 18 A. May I look?

17:49:11 19 Q. Certainly.

17:49:16 20 A. If I can find the  
17:49:19 21 information.

17:49:19 22 Q. It's Exhibit 24, USADA 170.

17:49:46 23 A. I really don't have an  
17:50:06 24 answer for you. I don't know anymore.  
17:50:08 25 I don't remember.

1 CYNTHIA MONGONGU - CROSS

17:50:09 2 Q. You don't remember?

17:50:11 3 A. I think I did do it, yes.

17:50:14 4 Q. Turning your attention to

17:50:17 5 the sample F3, did you manually

17:50:19 6 integrate the F3 sample, USADA 170?

17:50:39 7 A. As far as I can remember,

17:50:41 8 yes.

17:50:42 9 Q. And let's go peak by peak.

17:50:48 10 Did you manually integrate the internal

17:50:52 11 standard?

17:50:55 12 A. I looked at the internal

17:51:07 13 standard, yes.

17:51:08 14 Q. Did you manually integrate

17:51:09 15 it?

17:51:10 16 A. You're asking me questions

17:51:20 17 that I can't answer. I don't remember

17:51:22 18 at this stage if I integrated them or

17:51:25 19 not.

17:51:26 20 Q. Is that also true of the

17:51:28 21 other peaks in the sample?

17:51:38 22 A. Whether I manually

17:51:40 23 integrated them?

17:51:45 24 Q. You did?

17:51:45 25 A. I think so, yes.

1 CYNTHIA MONGONGU - CROSS

17:51:47 2 Q. 5-alpha and 5-beta and the  
17:51:50 3 Pdial?

17:51:53 4 A. Yes.

17:51:56 5 Q. And let me ask you this  
17:51:59 6 question. Do you sometimes manually  
17:52:08 7 integrate the internal standard in the  
17:52:15 8 samples? In other words, the F3, the  
17:52:19 9 F2, the F1 and the blank urine, do you  
17:52:22 10 sometimes manually integrate those?

17:52:24 11 A. Yes.

17:52:42 12 Q. And do you recall manually  
17:52:48 13 integrating any of the internal  
17:52:50 14 standards in sample 995474?

17:52:54 15 A. I do not recall.

17:53:07 16 Q. Do you ever record the  
17:53:09 17 number of times you manually integrate  
17:53:12 18 a particular peak?

17:53:14 19 A. No, I don't keep a record.

17:53:26 20 Q. Do you ever keep a record of  
17:53:28 21 what the isotopic values were before  
17:53:31 22 you did manual integration of the peak?

17:53:34 23 A. You mean the original  
17:53:50 24 values?

17:53:50 25 Q. Yes.



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17:53:53 2 A. They are always recorded.

17:53:56 3 Q. So you're saying that you  
17:53:59 4 recorded the values before -- before  
17:54:05 5 you got the final value when you do  
17:54:08 6 manual integration?

17:54:12 7 A. I don't record it. When the  
17:54:28 8 analysis is done it's an automatic  
17:54:30 9 analysis that's done. And I take that  
17:54:37 10 information where I can check whether  
17:54:40 11 the peaks were correctly done. Then I  
17:54:44 12 print the results that I get. And the  
17:54:54 13 original results are always there in  
17:54:56 14 the data.

17:55:00 15 Q. When you say they're in the  
17:55:01 16 data, they're in the electronic data  
17:55:04 17 files?

17:55:06 18 A. Yes, when I reload the data  
17:55:17 19 it shows the original values.

17:55:19 20 Q. Those values are never in  
17:55:20 21 the doc pack?

17:55:23 22 A. No.

17:55:26 23 Q. And there's no record in any  
17:55:29 24 of the materials we received of what  
17:55:30 25 the original values were for the

1 CYNTHIA MONGONGU - CROSS

17:55:40 2 sample?

17:55:42 3 A. No. But in the doc pack we  
17:55:56 4 show the data that was used to arrive  
17:55:58 5 at the conclusion of the analysis.

17:56:03 6 Q. I'd like to turn your  
17:56:19 7 attention to LNDD 309, Exhibit 26.  
17:56:37 8 Maybe 310. Earlier you described that  
17:57:05 9 you used blank urine as a method for  
17:57:09 10 peak matching -- excuse me, for peak  
17:57:11 11 identification. And in your  
17:57:28 12 declaration you attached -- I'm sorry,  
17:57:34 13 you didn't attach it. Well let me ask  
17:57:39 14 you this. Do you recognize what LNDD  
17:57:41 15 310 is?

17:57:43 16 A. Yes.

17:57:48 17 Q. And what is it?

17:57:49 18 A. It's the result of an IRMS  
17:57:57 19 analysis done on urine blank that we  
17:58:04 20 used for the analyses.

17:58:06 21 Q. And how do you -- where is  
17:58:10 22 the document that shows in the doc pack  
17:58:13 23 how you originally identified the  
17:58:17 24 target metabolites in the blank urine?  
17:58:21 25 Can you show that to me?

1 CYNTHIA MONGONGU - CROSS

17:58:25 2 A. It isn't in the doc pack.

17:58:42 3 Q. Because in order to use the  
17:58:48 4 blank urine method you have to first  
17:58:50 5 identify the target metabolites in the  
17:58:54 6 blank urine, correct?

17:59:13 7 THE INTERPRETER: I'm  
17:59:14 8 repeating the question.

17:59:28 9 A. Yes.

17:59:29 10 Q. But that data is nowhere in  
17:59:35 11 the documents we have been provided,  
17:59:37 12 correct?

17:59:38 13 A. No, there isn't anything  
17:59:47 14 about that in the documentation  
17:59:48 15 package.

17:59:48 16 Q. And was that document  
17:59:49 17 provided to the COFRAC auditor when you  
17:59:56 18 were accredited?

18:00:00 19 A. No.

18:00:01 20 Q. And is the identification  
18:00:08 21 information in the blank urine anywhere  
18:00:10 22 in any other document that we have  
18:00:14 23 received outside of the doc pack?

18:00:17 24 A. I really don't know.

18:00:58 25 Q. I'd like to turn your

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18:00:59 2 attention to your declaration at --

18:01:05 3 THE PRESIDENT: Excuse me,

18:01:06 4 Mr. Suh, would you give an indication,

18:01:09 5 I don't want to hurry you, how long you

18:01:12 6 might be with your cross examination?

18:01:14 7 Because if it's going to be awhile

18:01:16 8 we'll probably adjourn soon.

18:01:20 9 MR. SUH: One moment. We

18:01:50 10 have about half an hour more to go.

18:02:03 11 THE PRESIDENT: We will take

18:02:04 12 the adjournment at this point and we

18:02:08 13 need to say to the witness that since

18:02:12 14 the cross examination hasn't been

18:02:15 15 completed, would she please make sure

18:02:17 16 she doesn't talk about her evidence or

18:02:19 17 anything else to do with the case with

18:02:21 18 the legal team for USADA or any other

18:02:23 19 witnesses for uses.

18:02:42 20 THE WITNESS: Yes, thank

18:02:43 21 you.

18:02:44 22 THE PRESIDENT: And we will

18:02:46 23 resume her evidence when we finish the

18:02:48 24 videoconferencing sessions in the

18:02:54 25 morning.

1 CYNTHIA MONGONGU - CROSS

18:03:02 2 THE WITNESS: Thank you,

18:03:03 3 yes.

18:03:04 4 THE PRESIDENT: Thank you

18:03:04 5 very much.

18:03:08 6 (Time noted: 6:03 p.m.)

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STATE OF NEW YORK )  
 : ss.  
COUNTY OF NEW YORK )

I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify that the foregoing proceedings were taken before me on March 20, 2008;

That the within transcript is  
a true record of said proceedings;

That I am not connected by blood or marriage with any of the parties herein nor interested directly or indirectly in the matter in controversy, nor am I in the employ of the counsel.

IN WITNESS WHEREOF, I have  
hereunto set my hand this \_\_\_\_ day of  
\_\_\_\_\_, 2008.

GAIL F. SCHORR, C.S.R., C.R.R.

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| 2  | WITNESS     | DIR | CROSS | RED | REC |
| 3  |             |     |       |     |     |
| 4  | J. AMORY    | 9   | 9     | 62  | 120 |
| 5  |             |     |       | 122 | 123 |
| 6  |             |     |       | 123 |     |
| 7  |             |     |       |     |     |
| 8  | S. DAVIS    | 133 | 173   | 198 |     |
| 9  |             |     |       |     |     |
| 10 | K. GOODMAN  | 215 | 229   | 257 | 259 |
| 11 |             |     |       |     |     |
| 12 | C. MONGONGU | 264 | 265   |     |     |
| 13 |             |     |       |     |     |
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IN THE COURT OF ARBITRATION FOR SPORT  
-----x

FLOYD LANDIS,

Appellant,

v.

CAS 2007/A/1394

UNITED STATES ANTI-DOPING AGENCY,

Respondent.

-----x

VOLUME 3

March 21, 2008

9:06 a.m.

BEFORE:

MR. DAVID A.R. WILLIAMS, President

MR. DAVID RIVKIN, Arbitrator

MR. JAN PAULSSON, Arbitrator

REPORTED BY: GAIL F. SCHORR, C.S.R.



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A P P E A R A N C E S (Continued):  
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A P P E A R A N C E S (Continued):  
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AMBER LANDIS  
PAUL SCOTT  
KEITH GOODMAN  
SIMON DAVIS  
ARNIE BAKER  
LARRY BOWERS  
CYNTHIA MONGONGU  
CLAIRE FRELAT  
CAROLINE HATTON  
CHRISTIANE AYOTTE  
RICHARD CLARK  
DWIGHT MATTHEWS  
J. THOMAS BRENNAN

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A P P E A R A N C E S (Continued):

JENNEFER BARTHOLOMEW  
Holme Roberts & Owen

CARMEN MARTINEZ LOPEZ, ESQ.  
Debevoise & Plimpton

KATHY HOGG, ESQ.  
Court of Arbitration for Sport

DIANA CLARK, French Interpreter

TODD THOMPSON, TFI

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09:06:03 2

## P R O C E E D I N G S

09:06:03 3

THE PRESIDENT: Good morning,

09:06:05 4

everybody. Before we commence taking

09:06:08 5

this evidence, just for the record I note

09:06:11 6

that Appellant's motion to strike

09:06:15 7

untimely exhibits also refers to striking

09:06:18 8

related testimony, and the evidence of

09:06:24 9

Mr. Le Petit is one of those names given

09:06:27 10

there. So the tribunal proceeds on the

09:06:29 11

provisional basis with this evidence and

09:06:31 12

it's subject to the ruling which we will

09:06:34 13

make probably tomorrow about that motion.

09:06:36 14

I'll ask Mr. Paulsson if he

09:06:40 15

would get the session going, please.

09:06:46 16

MR. PAULSSON: Good morning,

09:07:02 17

Mr. Le Petit, I'm speaking to you from

09:07:04 18

way back at the end of the room. You

09:07:06 19

are looking at the three members of the

09:07:10 20

tribunal panel. I've counted 17 people

09:07:21 21

in the room who will be listening to

09:07:30 22

you and I'm just about to explain to

09:07:32 23

you how we will proceed with this

09:07:34 24

hearing.

09:07:38 25

First of all, are we right

1 P R O C E E D I N G S

09:07:40 2 in thinking that you are alone in the  
09:07:43 3 room with a technician?

09:07:49 4 MR. LE PETIT: No, in fact,  
09:07:50 5 there is one more person.

09:07:53 6 MR. PAULSSON: For the  
09:07:54 7 record, could you please identify that  
09:07:56 8 person.

09:07:57 9 MR. LE PETIT: Does he need  
09:08:04 10 to leave?

09:08:04 11 MR. PAULSSON: No, I didn't  
09:08:05 12 say that. I just want you to identify  
09:08:07 13 him.

09:08:17 14 MR. MARTIN: This is Laurent  
09:08:19 15 Martin. I'm going to be the next  
09:08:22 16 witness.

09:08:26 17 MR. PAULSSON: Laurent  
09:08:27 18 Martin from the laboratory who's the  
09:08:28 19 next witness. First of all, we're  
09:08:52 20 going to ask you if the testimony that  
09:08:54 21 you give will be frank and honest and  
09:08:56 22 we will ask if you please affirm that  
09:09:00 23 under penalty of perjury.

09:09:04 24 MR. LE PETIT: Yes, I do so  
09:09:05 25 affirm.

1 GERARD LE PETIT - DIRECT

09:09:06 2 MR. PAULSSON: First of all,  
 09:09:08 3 the lawyers for the parties will be  
 09:09:10 4 putting questions to you, each in turn.  
 09:09:19 5 And after that the members of the panel  
 09:09:21 6 may have questions for you after that.  
 09:09:29 7 And if our questions should lead to  
 09:09:31 8 further questions from the lawyers,  
 09:09:33 9 then they will also have the  
 09:09:34 10 opportunity to question you again.  
 09:09:37 11 That's it.

12 D I A N A C L A R K,  
 13 Called as the interpreter in this  
 14 action, resumed, having been previously  
 15 sworn.

16 G E R A R D L E P E T I T,  
 17 called as a witness on behalf of the  
 18 Respondent, having been first duly  
 19 affirmed by the Arbitrator (Jan  
 20 Paulsson), was examined and testified  
 21 through the interpreter via  
 22 videoconference as follows:

23 DIRECT EXAMINATION

24 BY MR. BARNETT:

09:09:44 25 Q. Good morning, Mr. Le Petit,

1 GERARD LE PETIT - DIRECT

09:09:47 2 my name is Matthew Barnett and I just  
09:09:49 3 have a few questions for you this  
09:09:51 4 morning. Did you submit a written  
09:09:58 5 statement in this case?

09:10:00 6 A. Yes, that's right, I did  
09:10:10 7 indeed submit a prior written  
09:10:13 8 declaration.

09:10:15 9 Q. And was that declaration  
09:10:16 10 accurate and correct?

09:10:18 11 A. Yes, it was.

09:10:31 12 MR. BARNETT: Thank you. I  
09:10:32 13 have nothing further at this time.

09:10:36 14 CROSS EXAMINATION

09:10:40 15 BY MR. SUH:

09:10:40 16 Q. Good afternoon.

09:10:46 17 A. Good morning.

09:10:48 18 Q. First, in your declaration  
09:10:51 19 you say at Page 1 that with LNDD you  
09:10:59 20 began making maintenance visits about  
09:11:02 21 five years ago.

09:11:20 22 A. Yes. Five years, maybe six  
09:11:24 23 perhaps.

09:11:24 24 Q. And at that time LNDD had  
09:11:28 25 approximately 10 to 15 GC/MS

1 GERARD LE PETIT - CROSS

09:11:36 2 instruments; is that correct?

09:11:44 3 A. Yes. Yes, roughly, but at  
09:11:53 4 least more than 10.

09:11:55 5 Q. And at the time of April of  
09:12:02 6 2006 did LNDD still have between 10 to  
09:12:07 7 15 GC/MS instruments?

09:12:22 8 A. Frankly, I think they did  
09:12:33 9 have about that number, something about  
09:12:34 10 that number, between 10 and 15, but I  
09:12:37 11 never counted them because it wasn't my  
09:12:39 12 job to count them.

09:12:41 13 Q. So just so that I'm clear,  
09:12:44 14 you do remember that they had 10 to 15  
09:12:47 15 when you began making maintenance  
09:12:49 16 visits, but you don't remember how many  
09:12:51 17 they had in April of 2006; is that  
09:12:56 18 right?

09:12:56 19 A. Well, yes, that's right. I  
09:13:32 20 really don't remember. I never had  
09:13:34 21 occasion to count them. I was looking  
09:13:36 22 at the MSD 22 machine and I never had  
09:13:41 23 to count them.

09:13:43 24 THE INTERPRETER: May I just  
09:13:44 25 say something to the witness, please.



1 GERARD LE PETIT - CROSS

09:14:00 2 I asked the witness if he would kindly  
09:14:02 3 speak more slowly and cut his sentences  
09:14:05 4 to give me time to interpret and he  
09:14:07 5 said he would do so. Thank you.

09:14:09 6 Q. When you go out on service  
09:14:11 7 calls to LNDD, or when you did go out  
09:14:15 8 on service calls to LNDD, did you also  
09:14:18 9 include other laboratories on that  
09:14:24 10 particular trip?

09:14:26 11 A. No. No, because what we do  
09:14:58 12 lasts -- takes more than a day.

09:14:59 13 Q. Immediately before going to  
09:15:01 14 LNDD did you go to another laboratory,  
09:15:04 15 or sometimes immediately after going to  
09:15:06 16 LNDD did you go to another laboratory?

09:15:08 17 A. I would say 99.9 percent of  
09:15:37 18 the time no.

09:15:39 19 Q. When you went on service  
09:15:42 20 calls how many different kinds of  
09:15:45 21 columns did you take with you?

09:15:48 22 A. One.

09:16:02 23 Q. And is that the Agilent  
09:16:05 24 19091 S-433?

09:16:15 25 A. Yes.

1 GERARD LE PETIT - CROSS

09:16:16 2 Q. I'd like to turn your  
09:16:23 3 attention to LNDD -- the document that  
09:16:27 4 begins at LNDD 1866.

09:16:52 5 MR. WEISS: Exhibit 141.

09:16:55 6 MR. RIVKIN: We just noticed  
09:16:57 7 we don't have one set of exhibits in  
09:17:03 8 here. Carmen is going to get them. Do  
09:17:05 9 you have an extra set behind you?

09:17:10 10 MS. BARTHOLOMEW: We'll give  
09:17:17 11 you this for now.

09:17:19 12 MR. RIVKIN: Thanks.

09:17:24 13 Q. And could you turn your  
09:17:25 14 attention to Page 16, 17, 16 and 17.

09:17:44 15 A. From which document? Are  
09:17:49 16 you talking about 16 and 17 of document  
09:17:52 17 48?

09:18:02 18 Q. I'm referring to the  
09:18:03 19 document which is referred to in your  
09:18:04 20 declaration in paragraph 7.

09:18:47 21 MR. BARNETT: Maybe if we  
09:18:48 22 could either use just the LNDD numbers  
09:18:50 23 or the page numbers from his report and  
09:18:52 24 not switch back and forth we'll avoid  
09:18:54 25 confusion.

1 GERARD LE PETIT - CROSS

09:18:55 2 MR. RIVKIN: How were the  
09:18:56 3 documents sent to him? Are they tabbed  
09:18:59 4 by exhibit number, or what?

09:19:01 5 MR. BARNETT: Yes.

09:19:02 6 MR. RIVKIN: What does he  
09:19:03 7 have in front of him? So you can refer  
09:19:04 8 him to Exhibit 141.

09:19:20 9 THE WITNESS: I'm looking at  
09:19:21 10 141, but which Page 16 are you talking  
09:19:24 11 about?

09:19:24 12 Q. It's LNDD 1886 and LNDD  
09:19:29 13 1887.

09:19:39 14 A. Okay. Got it.

09:19:43 15 Q. Do you see the handwriting  
09:19:44 16 on LNDD 1886 and 1887?

09:19:48 17 A. Yes.

09:19:56 18 Q. And is that your  
09:19:57 19 handwriting?

09:19:59 20 A. Yes.

09:20:00 21 Q. Now I'd like to turn your  
09:20:16 22 attention to LNDD Page 1903.

09:20:43 23 A. Yes.

09:20:44 24 Q. And first of all, the  
09:20:47 25 handwritten portions we just looked at,

1 GERARD LE PETIT - CROSS

09:20:49 2 were those portions written down when  
09:20:50 3 you actually visited LNDD in April of  
09:20:59 4 2006?

09:21:18 5 A. The document was printed in  
09:21:20 6 April 2006.

09:21:32 7 Q. Just so I'm clear, when did  
09:21:37 8 you fill out the handwritten information  
09:21:39 9 that's on 1886 and 1887, LNDD 1886 and  
09:21:44 10 1887?

09:21:45 11 A. It was on 24th of April  
09:22:20 12 2006.

09:22:33 13 Q. All right. When you -- did  
09:22:40 14 you fill out the information on LNDD  
09:22:44 15 1903 which is under the precision  
09:22:47 16 method parameters, did you fill that  
09:22:50 17 information out as it pertains to the  
09:22:52 18 column in April of 2006, April 24th of  
09:22:59 19 2006?

09:23:00 20 A. In order to do the work that  
09:23:37 21 I was called there to do you have to  
09:23:39 22 fill out all that information.

09:23:41 23 Q. And my question is when you  
09:23:42 24 filled out this information which is on  
09:23:46 25 LNDD 1903.

1 GERARD LE PETIT - CROSS

09:24:07 2 A. There's no date on it, but I  
09:24:10 3 will take a look and tell you. Normally  
09:24:13 4 that would be -- there's no date. The  
09:24:33 5 file date is 26th of April 2006. The  
09:24:37 6 person who signed it did not put a date  
09:24:41 7 on it and only signed for the results.

09:24:45 8 Q. Do you typically fill out  
09:24:48 9 any documentation at LNDD regarding  
09:24:52 10 your visits related to columns or  
09:24:56 11 column service?

09:24:57 12 A. No, no, not at all. The  
09:25:25 13 column in question it's always the  
09:25:27 14 same.

09:25:29 15 MR. PAULSSON: It's a  
09:25:30 16 reference column, I always use the same  
09:25:32 17 one.

09:25:32 18 A. It's a reference column.

09:25:36 19 Q. I don't believe that was my  
09:25:38 20 question. My question is do you fill  
09:25:40 21 out any documentation or -- well, any  
09:25:45 22 documentation or papers at LNDD  
09:25:48 23 regarding your column service?

09:25:53 24 A. I don't understand your  
09:26:14 25 question. What do you mean by column

1 GERARD LE PETIT - CROSS

09:26:16 2 service?

09:26:21 3 Q. When you service the GC/MS  
09:26:23 4 instruments, on your service visits do  
09:26:33 5 you fill out any documentation at LNDD?

09:26:37 6 A. All the documents are  
09:26:47 7 generally filled out at LNDD.

09:26:51 8 Q. Do you fill out any  
09:26:53 9 documents that are the laboratory's  
09:26:58 10 documents, not your documents like we  
09:27:00 11 have in front of us here, but  
09:27:03 12 laboratory documents?

09:27:06 13 A. No, I only fill out the file  
09:27:23 14 that I have in front of me.

09:27:26 15 Q. I'd like to turn your  
09:27:28 16 attention to paragraph 14 of your  
09:27:31 17 declaration where you say "I am certain  
09:27:43 18 that I took the Agilent column with me  
09:27:45 19 when I left."

09:27:51 20 A. Yes.

09:27:52 21 Q. So you -- I'm sorry, go  
09:27:55 22 ahead.

09:27:59 23 A. Yes, because the column all  
09:28:12 24 on its own represents one-third of the  
09:28:15 25 service package. So my case would be

1 GERARD LE PETIT - CROSS

09:28:18 2 pretty empty if I didn't take it away  
09:28:20 3 with me.

09:28:21 4 Q. In paragraph 13 just above  
09:28:29 5 it you say, "It is probable that after  
09:28:35 6 removing the Agilent column and  
09:28:41 7 installing LNDD's column I forgot to  
09:28:44 8 enter the description of LNDD's  
09:28:46 9 column." Do you see that?

09:29:12 10 A. Yes, I'm reading it. What I  
09:29:32 11 said was when I put my column in in  
09:29:35 12 place of the one that was there at  
09:29:37 13 LNDD, I make a note of the length, the  
09:29:41 14 diameter, but I don't necessarily  
09:29:43 15 change the name, which has no  
09:29:45 16 importance. It's not relevant. And I  
09:29:57 17 also write down the thickness of the  
09:30:00 18 film.

09:30:02 19 Q. And is it your testimony  
09:30:03 20 that you have a memory of installing  
09:30:07 21 LNDD's column here today?

09:30:27 22 A. Objectively it must have  
09:30:29 23 been installed because if it hadn't  
09:30:31 24 been the equipment could not have  
09:30:32 25 worked.

1 GERARD LE PETIT - CROSS

09:30:34 2 Q. That's not my question. My  
09:30:36 3 question is whether or not you have a  
09:30:37 4 memory of installing LNDD's column, not  
09:30:41 5 what must have happened, but what you  
09:30:43 6 remember happening.

09:31:06 7 A. Well, even if my memory's at  
09:31:08 8 fault I must absolutely have changed  
09:31:10 9 it.

09:31:12 10 Q. So is your testimony that  
09:31:15 11 your memory is at fault about whether  
09:31:18 12 or not you remember installing LNDD's  
09:31:23 13 column, not what you think must have  
09:31:26 14 happened, but what you remember?

09:32:16 15 A. Okay, every time -- I  
09:32:37 16 changed 10 columns a day. My memory  
09:32:41 17 may not recall that exactly, but what  
09:32:44 18 I'm paid for is to change the column  
09:32:47 19 and that's what I did.

09:32:54 20 MR. SUH: No further  
09:32:54 21 questions.

09:32:55 22 MR. BARNETT: I don't have  
09:32:56 23 any questions.

09:33:01 24 MR. PAULSSON: We, the panel  
09:33:17 25 has no further questions for you. So



1

09:33:19 2 as a result, your hearing is at an end  
09:33:22 3 and we thank you very much.

09:33:29 4 THE WITNESS: I still have  
09:33:31 5 the column, it's in my car.

09:34:06 6 MR. PAULSSON: Good morning,  
09:34:08 7 Mr. Martin. We understand that you  
09:34:15 8 were present during Mr. Le Petit's  
09:34:19 9 hearing?

09:34:21 10 MR. MARTIN: Yes.

09:34:22 11 MR. PAULSSON: So you've  
09:34:25 12 already seen how that works. If even  
09:34:37 13 if you understand the question in the  
09:34:39 14 language in which it's presented please  
09:34:42 15 wait for the translation because we  
09:34:43 16 have to transcribe everything.

09:34:46 17 MR. MARTIN: Fine.

09:34:48 18 MR. PAULSSON: We ask you to  
09:35:01 19 affirm that the testimony you give  
09:35:03 20 today will be sincere and truthful  
09:35:05 21 under penalty of perjury. Do you so  
09:35:08 22 affirm?

09:35:09 23 MR. MARTIN: Yes, I do. I  
09:35:11 24 affirm it.

25

1 LAURENT MARTIN - DIRECT

2 D I A N A C L A R K,  
3 called as the translator in this  
4 action, resumed, having been previously  
5 sworn.

6 L A U R E N T M A R T I N,  
7 called as a witness on behalf of the  
8 Respondent, having been first duly  
9 affirmed by the Arbitrator (Jan  
10 Paulsson), was examined and testified  
11 through the interpreter via  
12 videoconference as follows:

13 DIRECT EXAMINATION

09:35:15 14 BY MR. DUNN:

09:35:15 15 Q. Good morning, Mr. Martin.  
09:35:17 16 My name is Dan Dunn and I'm one of the  
09:35:19 17 attorneys for USADA.

09:35:30 18 A. Good day.

09:35:32 19 Q. Have you filed a witness  
09:35:34 20 statement in this proceeding?

09:35:39 21 A. Yes.

09:35:46 22 Q. Is it true and accurate?

09:35:52 23 A. Yes, absolutely.

09:35:56 24 MR. DUNN: No further  
09:35:57 25 questions.

1 LAURENT MARTIN - CROSS

09:35:59 2 CROSS EXAMINATION

09:36:04 3 BY MR. SUH:

09:36:04 4 Q. Good afternoon, Mr. Martin.

09:36:09 5 I'd like to turn your attention to your

09:36:11 6 witness statement. On the bottom part

09:36:13 7 of your witness statement it says

09:36:18 8 "Chain of custody of bottle 995474 A."

09:36:48 9 A. Yes, I see it.

09:36:49 10 Q. On the bottom it says "On

09:36:53 11 July 21, 2006, at 7:25 a.m. I took the

09:36:57 12 A bottle out of the cold room, which is

09:37:07 13 CH.FR1."

09:37:19 14 MR. DUNN: Excuse me, I

09:37:20 15 think, I apologize for interrupting but

09:37:22 16 I think you said 6:25 rather than 7:25.

09:37:34 17 THE INTERPRETER: I'm going

09:37:35 18 to read the sentence again because I

09:37:37 19 misread a number.

09:38:01 20 A. Yes, that's correct, it was

09:38:05 21 the CH.FR1.

09:38:10 22 Q. And when you took the A

09:38:12 23 bottle out of the cold room you didn't

09:38:16 24 record it on the form that is USADA

09:38:22 25 00006, which is Exhibit 24? Mr.

1 LAURENT MARTIN - CROSS

09:39:01 2 Martin, it's Exhibit 24 and it's USADA  
09:39:06 3 page 0006. It's in the first part of  
09:39:10 4 the document package, the doc pack.

09:39:18 5 A. Yes, yes, I see it.

09:39:21 6 Q. And you didn't record it on  
09:39:24 7 removal of the bottle from USADA 00006,  
09:39:29 8 correct?

09:39:38 9 A. That's quite right. I wrote  
09:39:47 10 it on a document that was part of my  
09:39:49 11 service record.

09:39:53 12 Q. And the document that is  
09:39:55 13 part of your service record, are you  
09:39:58 14 referring to -- well, let me ask you  
09:40:03 15 what document are you referring to?

09:40:05 16 A. I'm referring to document  
09:40:26 17 LNDD 1590.

09:40:31 18 Q. Which is the page which  
09:40:39 19 tracked the initial aliquoting for the  
09:40:44 20 EPO test; is that right?

09:40:57 21 A. Yes, that's correct.

09:40:58 22 Q. And when you were -- when  
09:41:06 23 you were removing the bottle out of the  
09:41:10 24 cold room at 7:25 a.m., was there  
09:41:12 25 anybody else with you?

1 LAURENT MARTIN - CROSS

09:41:14 2 A. I was alone in the cold  
09:41:38 3 room.

09:41:38 4 Q. And what about from the  
09:41:40 5 period of 7:25 a.m. through to 9 a.m.,  
09:41:51 6 were you alone or were you with  
09:41:55 7 someone, anyone?

09:41:55 8 A. I was certainly with my  
09:42:15 9 colleague who works the same schedule  
09:42:17 10 that I do.

09:42:18 11 Q. And who was that?

09:42:21 12 A. That would be Jean Antoine  
09:42:27 13 Martin.

09:42:37 14 Q. Turning to page --

09:42:42 15 A. Code operator 42.

09:42:57 16 Q. Let me ask you this question.  
09:42:58 17 On Page 2 of your declaration it says  
09:43:07 18 that on Page 1591 -- well, it says Page  
09:43:11 19 1591 shows that I transferred it to  
09:43:15 20 Garcia, operator code 19. Do you see  
09:43:18 21 that?

09:43:26 22 A. Yes, yes, I see it.

09:43:44 23 Q. Do you remember transferring  
09:43:46 24 it to Garcia, or are you simply  
09:43:51 25 referring to the fact that Page LNDD

1 LAURENT MARTIN - CROSS

09:43:54 2 1591 shows that you transferred it to  
09:43:56 3 Garcia?

09:43:57 4 A. Well, I transferred it at  
09:44:46 5 9:06 to someone, and in fact record  
09:44:51 6 1591 shows that it was to Garcia.

09:44:54 7 MR. PAULSSON: Do you  
09:44:58 8 remember doing it or is it just that  
09:44:59 9 it's written down?

09:45:03 10 THE WITNESS: I do remember  
09:45:09 11 that I transferred it in room 006 but I  
09:45:13 12 don't remember to which exact person.

09:45:17 13 MR. SUH: No further  
09:45:18 14 questions.

09:45:24 15 MR. DUNN: No questions.  
09:45:25 16 Thank you.

09:45:31 17 MR. PAULSSON: Thank you  
09:45:40 18 very much. Your hearing is over.

09:45:44 19 THE WITNESS: Thank you.

09:45:47 20 MR. PAULSSON: Good-by.

09:45:59 21 THE PRESIDENT: We'll take  
09:46:01 22 10 minutes while everybody gets back  
09:46:03 23 into shape in the other room.

09:46:04 24 (A recess was taken.)

10:05:28 25 MR. PAULSSON: Good morning,

1

10:05:38 2 ma'am. You understand we're going to  
10:05:41 3 continue your hearing and that the  
10:05:46 4 terms of your swearing continue to be  
10:05:47 5 in effect?

10:05:49 6 THE WITNESS: Yes, I  
10:05:50 7 understand that.

10:05:50 8 D I A N A C L A R K,  
10:05:50 9 called as the interpreter in this  
10:05:50 10 action, resumed, having been previously  
10:05:54 11 sworn.

12 C Y N T H I A M O N G O N G U,  
13 resumed, having been previously duly  
14 affirmed, was examined and testified  
15 through the interpreter further as  
16 follows:

17 CONTINUED CROSS EXAMINATION

10:05:56 18 BY MR. SUH:

10:05:59 19 Q. Good morning.

10:06:00 20 A. Good morning.

10:06:00 21 Q. I'd like to turn your  
10:06:02 22 attention to Page 4 of your declaration  
10:06:39 23 at the bottom. You testify that -- you  
10:06:46 24 testify about the column used in the  
10:06:49 25 GC/MS instrument here. And on Page 4

1 CYNTHIA MONGONGU - CROSS

10:07:06 2 you testify that "At the end of this  
10:07:09 3 type of service call, the DB-17ms  
10:07:27 4 column used for our confirmation  
10:07:29 5 analyses, is normally reinstalled,"  
10:07:34 6 referring to the visit by Mr. Le Petit.  
10:07:36 7 Do you see that?

10:08:28 8 A. Yes.

10:08:28 9 Q. All right. And in looking  
10:08:34 10 at -- first of all, at LNDD you have  
10:08:38 11 more than one kind of column in the  
10:08:43 12 laboratory, correct?

10:08:56 13 A. Yes.

10:08:56 14 Q. How many different kinds of  
10:08:59 15 columns do you have in the laboratory?

10:09:03 16 A. We mostly use the HP11 --  
10:09:21 17 the HP1.

10:09:24 18 Q. And how many different kinds  
10:09:25 19 of columns are used at LNDD?

10:09:29 20 A. The ones that I know, that I  
10:09:47 21 use at LNDD would be the DB-17ms used  
10:09:54 22 for IRMS, used for IRMS, and the HP1  
10:10:07 23 which is used for part of the control.

10:10:11 24 Q. And the DB-17ms?

10:10:17 25 A. Yes, that's what I just



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10:10:19 2 said.

10:10:21 3 Q. But there are other columns  
10:10:25 4 in LNDD, correct?

10:10:29 5 A. There must be, but I don't  
10:10:38 6 know, I don't know what types.

10:10:45 7 Q. You then go on to say in  
10:10:46 8 April 2006 instead of reinstalling the  
10:10:50 9 DB-17ms column you decided to install a  
10:10:53 10 new DB-17 -- we decided to install a  
10:10:57 11 new DB-17ms column. Who actually did  
10:11:02 12 that installation?

10:11:23 13 A. I'm not able to say. I'm  
10:11:36 14 not able to tell you who did that  
10:11:39 15 reinstallation. You would have to look  
10:11:40 16 at the maintenance sheets to see who  
10:11:42 17 did that installation.

10:11:47 18 Q. And you weren't present for  
10:11:49 19 that installation?

10:11:52 20 A. When he did the maintenance,  
10:12:04 21 the OQPV, I know that I was present,  
10:12:10 22 because I'm in charge of the equipment.

10:12:14 23 Q. But you weren't present when  
10:12:16 24 the column was, a new DB-17ms column  
10:12:26 25 was installed?

1 CYNTHIA MONGONGU - CROSS

10:12:34 2 A. I really cannot answer that.

10:12:36 3 I cannot call upon my memory to answer

10:12:38 4 that question, so I cannot answer you.

10:12:40 5 Q. And you don't know the date

10:12:41 6 at which that new, you say the new

10:12:49 7 DB-17ms column was installed?

10:12:55 8 A. What I can tell you is that

10:13:06 9 the new DB-17ms column was installed

10:13:10 10 when the OQPV was done.

10:13:14 11 MR. DUNN: When the what,

10:13:17 12 I'm sorry?

10:13:37 13 THE INTERPRETER: We're just

10:13:38 14 looking for the exact term. OQPV,

10:13:58 15 occupational qualification performance

10:14:00 16 verification.

10:14:02 17 Q. That was the visit from Mr.

10:14:05 18 Le Petit, correct?

10:14:06 19 A. Yes, that's right.

10:14:14 20 Q. I'd like to turn your

10:14:35 21 attention now to Exhibit 91, LNDD 1339

10:14:43 22 and 1362. Now that we have control of

10:15:18 23 our -- you know, I would ask the panel

10:15:22 24 to direct the witness not to look at

10:15:24 25 the values in the doc pack. We'll show

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10:15:27 2 her the chromatograms, but if the  
10:15:30 3 witness looks at the identification of  
10:15:33 4 the peaks it doesn't serve any purpose  
10:15:35 5 to ask her how she does the pattern  
10:15:37 6 match.

10:15:40 7 MR. DUNN: Well, we would  
10:15:42 8 ask that the witness be allowed to look  
10:15:44 9 at whatever she needs to provide the  
10:15:48 10 accurate answers to the questions.

10:15:53 11 MR. YOUNG: If the question  
10:15:54 12 is what the witness looks at when she  
10:15:56 13 does -- the witness ought to be able to  
10:15:58 14 look at what she looks at when she does  
10:16:00 15 the analysis.

10:16:01 16 MR. SUH: That's fine, but  
10:16:03 17 she shouldn't be able to look through  
10:16:05 18 the entirety of the doc pack, look at  
10:16:08 19 values, look at the peaks that they've  
10:16:10 20 identified, that would serve no purpose  
10:16:13 21 if that's done.

10:16:21 22 MR. RIVKIN: I think take it  
10:16:24 23 stage by stage. Show her a particular  
10:16:27 24 page. She should only look at the page  
10:16:29 25 you're showing her. But also ask if in

1 CYNTHIA MONGONGU - CROSS

10:16:32 2 looking at the peaks if that's the  
10:16:34 3 information she looks at. If there's  
10:16:36 4 other information that she looks at  
10:16:37 5 then she ought to be able to look at  
10:16:39 6 that without looking necessarily at the  
10:16:41 7 entire document pack.

10:16:43 8 MR. SUH: I think that's  
10:16:44 9 fair. In particular, there's only one  
10:16:46 10 page that we wouldn't want her to look  
10:16:49 11 at and that's the results page. And  
10:16:51 12 the results page in this instance is  
10:16:54 13 highlighted. That's why we have a  
10:16:56 14 concern. The results page is the page  
10:16:58 15 that she wouldn't be able to see at  
10:17:01 16 this stage in the pattern match because  
10:17:03 17 the results hadn't yet been determined.  
10:17:05 18 I think we can identify what page that  
10:17:06 19 is.

10:17:07 20 MR. RIVKIN: Why don't you  
10:17:08 21 just go ahead and ask her questions.

10:17:10 22 Q. The question is first can  
10:17:11 23 you take a look at LNDD 1339. Do you  
10:17:14 24 recognize what LNDD 1339 is?

10:17:19 25 A. Yes.

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10:17:26 2 Q. And then can you describe  
10:17:29 3 what LNDD 1339 is?

10:17:31 4 A. In fact, it's the page that  
10:17:47 5 shows, that identifies all the peaks of  
10:17:54 6 the IRMS -- of the GC/MS.

10:17:57 7 THE INTERPRETER: I'm sorry.

10:17:58 8 A. So you have the retention  
10:18:03 9 times and the relative retention times  
10:18:05 10 of the analytes and the answer -- the  
10:18:28 11 answers on the diagnostic analyses, ion  
10:18:35 12 analyses.

10:18:36 13 THE INTERPRETER: Excuse me.

10:18:38 14 A. The responses concerning ion  
10:18:40 15 analyses.

10:18:42 16 MR. SUH: I think the word  
10:18:43 17 is abundance that they're looking for,  
10:18:47 18 ion abundance.

10:18:50 19 THE INTERPRETER: May I ask  
10:18:51 20 the witness?

10:18:52 21 MR. SUH: Sure.

10:18:59 22 THE INTERPRETER: No, the  
10:18:59 23 word she used was response, responses.

10:19:11 24 Q. And is the data on LNDD 1339  
10:19:16 25 the data that you would have seen when

1 CYNTHIA MONGONGU - CROSS

10:19:18 2 you ran the GC/MS analysis, the data  
10:19:26 3 generated by the GC/MS analysis?

10:19:43 4 A. Yes. Yes, it's the result.

10:19:46 5 Q. All right. I'd like to turn  
10:19:51 6 your attention to LNDD 1362, yes, 1362.

10:20:08 7 Do you recognize what LNDD 1362 is?

10:20:13 8 A. It's a chromatogram of the  
10:20:41 9 sample which ends with 856.

10:20:46 10 Q. It's the matching IRMS  
10:20:49 11 chromatogram to the GC/MS chromatogram  
10:20:51 12 that is 1339, correct?

10:20:55 13 A. Yes.

10:21:06 14 Q. Now, looking at the two  
10:21:09 15 chromatograms side by side, could you  
10:21:11 16 explain how you would use pattern, peak  
10:21:15 17 pattern matching to identify the  
10:21:19 18 testosterone metabolites?

10:21:41 19 MR. RIVKIN: Does she have a  
10:21:42 20 laser pen, that might make it easier?

10:21:49 21 A. So first of all, before  
10:21:55 22 doing it on the sample, I do matching  
10:22:02 23 on -- I do matching on the urine blank.  
10:22:14 24 And then so that can enter the results  
10:22:16 25 onto the results log sheet. And then

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10:22:21 2 after that I do it on the sample. So I  
10:22:27 3 have to do it first on the blank and  
10:22:32 4 then I do the matching on the sample.  
10:22:35 5 That's how I do my work.

10:22:38 6 Q. So your testimony is that  
10:22:40 7 actually you do the blank urine  
10:22:44 8 retention time and relative retention  
10:22:46 9 time analysis first, correct?

10:22:48 10 A. Yes, I enter the information  
10:23:14 11 for the urine blank and then for the  
10:23:16 12 sample.

10:23:17 13 Q. And then after you do that,  
10:23:20 14 your second step you do peak pattern  
10:23:22 15 matching; is that correct?

10:23:35 16 A. No, as a matter of fact, the  
10:23:40 17 pattern matching is first of all done  
10:23:47 18 on the blank urine, we look at the  
10:23:51 19 retention time and then we do the same  
10:23:55 20 thing for the sample.

10:23:57 21 Q. So your pattern matching  
10:23:59 22 that you're describing now is the  
10:24:01 23 pattern matching from the blank urine  
10:24:05 24 and not from the GC/MS phase; is that  
10:24:09 25 right?

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10:24:09 2 A. No, let me explain how I  
10:24:25 3 work. First of all, we have the  
10:24:34 4 chromatographic profile GC/MS which is  
10:24:42 5 compared to the chromatographic profile  
10:24:44 6 obtained using IRMS. As soon as we  
10:24:51 7 finish doing the identification of the  
10:24:54 8 blank urine, then I do it on the  
10:25:00 9 sample. That's it.

10:25:02 10 Q. So let me see if I  
10:25:06 11 understand you right. You're saying  
10:25:09 12 you use in your first step pattern  
10:25:12 13 matching between the GC/MS  
10:25:16 14 chromatogram, which is LNDD 1339,  
10:25:19 15 right?

10:25:38 16 A. I'm not quite sure if I  
10:25:52 17 understand the direction of this  
10:25:53 18 question. I do a study -- I study  
10:25:56 19 first of all -- first of all, I do the  
10:26:02 20 pattern matching.

10:26:04 21 Q. Let me just stop you there.  
10:26:06 22 What patterns are you matching? Which  
10:26:09 23 chromatograms are you matching?

10:26:12 24 A. GC/MS and IRMS.

10:26:21 25 Q. So I would ask you to



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10:26:23 2 conduct the pattern matching analysis  
10:26:25 3 from 1339 and 1362 which you must have  
10:26:30 4 done since that is your method as you  
10:26:32 5 have described yesterday.

10:26:55 6 A. Yes, except that I do it on  
10:26:57 7 the blank urine and then on the sample  
10:26:59 8 so I have to do both. If you want me  
10:27:08 9 to show you how I do it, I will show  
10:27:11 10 you.

10:27:11 11 Q. Certainly. Are you  
10:27:16 12 referring to the blank urine retention  
10:27:19 13 time analysis, is that what you're  
10:27:21 14 going to show me?

10:27:24 15 A. I'm just going to show you  
10:27:30 16 how I do the identification for the  
10:27:32 17 matching and then what follows.

10:27:36 18 Q. That's fine. Could you  
10:27:38 19 state for the record what pages you are  
10:27:40 20 looking at when you do that.

10:27:50 21 A. Would you like me to do it  
10:27:53 22 on the fraction we're looking at?

10:27:55 23 Q. Sure.

10:28:04 24 A. This is Page LNDD 1337. And  
10:29:14 25 the chromatogram on LNDD 1360. So

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10:30:05 2 here's the GC/MS chromatographic  
10:30:09 3 profile. I'm looking, usually the  
10:30:20 4 chromatographic profile that we see is  
10:30:22 5 much bigger and we don't see it. And  
10:30:30 6 here you can see the area where the  
10:30:32 7 internal standard appears with its  
10:30:37 8 retention time here. And here you have  
10:30:47 9 the 11 ketoetio acetate.

10:31:04 10 MR. DUNN: Excuse me, Todd,  
10:31:06 11 may I ask -- Mr. Suh, would you ask  
10:31:09 12 Todd to highlight what she just said so  
10:31:11 13 everyone can see it. The 11  
10:31:15 14 ketoetiocholanolone acetate.

10:31:30 15 A. So here you have the retention  
10:31:32 16 time of the 11 ketoetiocholanolone  
10:31:40 17 acetate which is the peak you see here  
10:31:45 18 and because inside, across the bottom  
10:31:48 19 here you have the time axis. And  
10:31:56 20 underneath here you have the GC/MS  
10:31:59 21 chromatogram. I beg your pardon, the  
10:32:04 22 IRMS chromatogram underneath. Next I  
10:32:13 23 need to look at the other page so that I  
10:32:15 24 can see the retention times.

10:32:24 25 Q. What page are you looking

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10:32:25 2 at?

10:32:26 3 A. 1361.

10:32:42 4 MR. SUH: She's looking at  
10:32:44 5 the results page. 1361, right at the  
10:32:46 6 top it says "Stable isotope CF analysis  
10:32:50 7 results." And the peaks are now  
10:32:52 8 highlighted. This is the form that we  
10:32:54 9 had asked she not be able to review  
10:32:56 10 during this process.

10:32:58 11 MR. DUNN: May I respond. I  
10:32:59 12 think the witness is explaining how she  
10:33:03 13 does it in direct response to the  
10:33:05 14 question and now she's proceeding and  
10:33:07 15 Mr. Suh is seeking to artificially  
10:33:09 16 constrain her from what she normally  
10:33:12 17 does.

10:33:13 18 MR. RIVKIN: Is the data on  
10:33:19 19 Page 1361 available to you when you are  
10:33:23 20 doing the initial blank urine analysis  
10:33:28 21 comparison that you're describing?

10:33:31 22 THE WITNESS: Yes.

10:33:54 23 MR. RIVKIN: Mr. Suh, if  
10:33:55 24 that's the case then -- if you believe  
10:33:59 25 she doesn't have this page then you can

1 CYNTHIA MONGONGU - CROSS

10:34:01 2 cross examine her on that.

10:34:04 3 MR. SUH: All right, let's  
10:34:06 4 proceed.

10:34:07 5 MR. RIVKIN: Let me ask one  
10:34:09 6 other question. Is it available in  
10:34:10 7 this form or is it available in some  
10:34:12 8 other form that you're looking at?

10:34:17 9 THE WITNESS: No, it's in  
10:34:22 10 that form that we see.

10:34:26 11 Q. I would ask if the sample,  
10:34:28 12 if the peaks are highlighted as they  
10:34:30 13 are below in the sample day, the  
10:34:35 14 identification of the peaks?

10:34:42 15 A. Do you mean highlighted in  
10:34:53 16 yellow?

10:34:54 17 Q. Yes. Or highlighted,  
10:34:57 18 highlighted in yellow or whatever color  
10:35:00 19 it is.

10:35:03 20 MR. RIVKIN: I don't see  
10:35:04 21 anything highlighted.

10:35:07 22 MR. SUH: If you look at the  
10:35:08 23 bottom.

10:35:09 24 MR. RIVKIN: Oh, I see.

10:35:13 25 MR. DUNN: You mean in bold?

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10:35:18 2 A. No, there is nothing  
10:35:22 3 highlighted. We underline it once  
10:35:25 4 we've analyzed it.

10:35:29 5 MR. PAULSSON: Identified  
10:35:30 6 the peaks.

10:35:30 7 A. Identified the peaks.

10:35:32 8 MR. RIVKIN: But the data in  
10:35:34 9 the box at the bottom of Page 1361 is  
10:35:37 10 available to you when you are doing the  
10:35:38 11 initial analysis, you're looking at  
10:35:40 12 this data when you're doing the initial  
10:35:42 13 analysis?

10:35:45 14 THE WITNESS: Yes, I do have  
10:36:01 15 this entire page chart available to me  
10:36:07 16 when we do the IRMS analysis.

10:36:13 17 Q. All right, we'll proceed.  
10:36:15 18 So please go on and complete your  
10:36:17 19 description of how you conduct your  
10:36:21 20 peak pattern matching.

10:36:42 21 A. I also need to look at Page  
10:36:44 22 1337 which corresponds to the IRMS  
10:36:47 23 matching -- the GC/MS matching. I need  
10:37:30 24 1332, the matching for the GC/MS as  
10:37:34 25 well.

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10:37:39 2 Q. We'll put that up. But what  
10:37:42 3 you're looking at of course is retention  
10:37:43 4 times between the GC/MS and the blank  
10:37:46 5 urine; is that correct?

10:37:51 6 A. You asked me what  
10:38:19 7 information I can see on this form  
10:38:20 8 here. So we have the chromatographic  
10:38:26 9 profile here and the retention time of  
10:38:31 10 the analytes below.

10:38:34 11 Q. And you are comparing those  
10:38:35 12 to the retention time of the analytes  
10:38:38 13 in the blank urine?

10:38:40 14 A. No, I'm not doing matching.  
10:38:57 15 I'm establishing the internal standard.  
10:39:03 16 Here in GC/MS at that time, I think  
10:39:10 17 it's 1070 if I could see it.

10:39:16 18 MR. PAULSSON: I'm situating  
10:39:18 19 it.

10:39:18 20 A. I have situated it.

10:39:25 21 Q. And so what is your next  
10:39:27 22 step?

10:39:33 23 A. Now we have the IRMS  
10:39:36 24 chromatogram. And I'd like to see the  
10:39:57 25 GC/MS above it, please. So as you can

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10:40:11 2 see here you have the GC/MS  
10:40:13 3 chromatographic profile with a  
10:40:32 4 retention time which I situated at  
10:40:36 5 10.66.

10:40:36 6 MR. PAULSSON: Internal  
10:40:39 7 standard.

10:40:43 8 A. And as you can see below,  
10:40:45 9 first of all, we have the internal  
10:40:46 10 standard which I pointed out and here's  
10:40:53 11 the 11 ketoetio which is represented by  
10:40:58 12 this peak underneath. So you have the  
10:41:04 13 exact same order of elution in the  
10:41:06 14 GC/MS as in the IRMS.

10:41:11 15 Next I take the retention  
10:41:18 16 times from the IRMS which I'm going to  
10:41:30 17 enter into the LNDD record form 1390.  
10:41:48 18 And here we are in the blank urine. I  
10:41:54 19 put the retention time in here and in  
10:42:00 20 here the retention time of the molecule  
10:42:03 21 that we're interested in.

10:42:08 22 MR. RIVKIN: I'm sorry,  
10:42:09 23 where is the retention time?

10:42:14 24 THE WITNESS: The internal  
10:42:16 25 standard retention time is there.

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10:42:22 2 MR. RIVKIN: Thank you.

10:42:23 3 A. And that is the retention  
10:42:24 4 time of the 11 ketoetio. And then I do  
10:42:39 5 the same thing for the sample.

10:42:52 6 Q. What do you mean by your  
10:42:54 7 last statement that you do the same  
10:42:57 8 thing for the sample? What is the  
10:43:03 9 "same thing"?

10:43:31 10 A. Now we're on Page 1339. So  
10:44:07 11 this is the chromatographic profile of  
10:44:11 12 the GC/MS of the sample which has the  
10:44:18 13 internal standard still in the same  
10:44:20 14 location. And over here we have the  
10:44:28 15 chromatographic profile from IRMS and  
10:44:35 16 when we finish the analysis I put it  
10:44:38 17 onto the results page to register the  
10:44:52 18 internal standard.

10:44:55 19 Q. And how do you determine  
10:44:57 20 which one of those peaks on the IRMS is  
10:44:59 21 the internal standard?

10:45:02 22 A. On this one?

10:45:07 23 Q. Yes.

10:45:08 24 A. If you can show me Page  
10:45:17 25 1363.



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10:45:18 2 Q. I'm sorry, just by using  
10:45:20 3 pattern matching how would you match  
10:45:22 4 the pattern in the GC/MS against the  
10:45:25 5 IRMS? What's the peak pattern between  
10:45:48 6 the peaks around the internal standard  
10:45:50 7 on the GC/MS and where it would  
10:45:53 8 approximately be in the IRMS?

10:46:04 9 A. We have the 11 ketoetio  
10:46:41 10 which appears in this area.

10:46:44 11 Q. I'm sorry, my question was  
10:46:46 12 really directed towards the internal  
10:46:47 13 standard. How do you pattern match the  
10:46:52 14 internal standard from the GC/MS to the  
10:46:59 15 IRMS?

10:47:01 16 A. The internal standard is  
10:47:12 17 here and on the IRMS it appears here.

10:47:18 18 Q. Which one of those is it?

10:47:21 19 A. In order to certify that  
10:47:28 20 it's this one or that one as a function  
10:47:35 21 -- I look at the retention time that we  
10:47:37 22 got on the IRMS.

10:47:38 23 Q. So you couldn't actually do  
10:47:40 24 it just by looking at the peak pattern?

10:47:52 25 A. No, looking at the peak

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10:47:58 2 patterns and the retention times  
10:48:00 3 together, it's the combination of those  
10:48:02 4 two. So the first thing I do is look  
10:48:11 5 at the peak pattern which is the order  
10:48:18 6 and then in order to look at the peak  
10:48:20 7 -- in order to look at the peak pattern  
10:48:22 8 I need the whole package.

10:48:35 9 THE INTERPRETER: Excuse me.  
10:48:36 10 I'm just asking the witness to slow  
10:48:38 11 down a bit.

10:48:39 12 A. It's the whole package of  
10:48:43 13 the two which allows me to make the  
10:48:46 14 comparison which allows me to identify  
10:48:48 15 the molecule.

10:48:49 16 Q. And when you say the whole  
10:48:51 17 package you mean the retention time?

10:48:57 18 A. Yes, the retention times in  
10:49:02 19 the IRMS.

10:49:05 20 MR. RIVKIN: Before you  
10:49:06 21 leave these pages, I don't know if  
10:49:07 22 you're going to or not, but let me ask  
10:49:10 23 a question. The bottom -- remind me  
10:49:13 24 which one the chart is on the bottom.

10:49:34 25 THE WITNESS: So this is the

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10:49:41 2 IRMS chromatogram with the time axis at  
10:49:43 3 the bottom. And the peak intensity on  
10:49:47 4 the left side.

10:49:48 5 MR. RIVKIN: And this is for  
10:49:49 6 the blank urine sample or this is for  
10:49:51 7 the actual sample?

10:49:55 8 THE WITNESS: That's for the  
10:50:00 9 sample not for the blank urine.

10:50:03 10 MR. RIVKIN: And I see that  
10:50:04 11 the machine has identified two peaks  
10:50:06 12 that are very close together, numbers 4  
10:50:08 13 and 5.

10:50:20 14 THE WITNESS: There?

10:50:21 15 MR. RIVKIN: Yes.

10:50:24 16 THE WITNESS: Yes.

10:50:25 17 MR. RIVKIN: How do you  
10:50:26 18 identify which responses relate to  
10:50:33 19 which peak for two peaks that are  
10:50:35 20 effectively together like that?

10:50:40 21 THE WITNESS: Do you mean on  
10:50:55 22 the IRMS?

10:50:56 23 MR. RIVKIN: Yes.

10:50:58 24 THE WITNESS: I didn't  
10:51:15 25 really look in any great detail at this

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10:51:17 2 particular one because it was not of  
10:51:19 3 interest but the software was what  
10:51:30 4 decided where to cut this peak off, so  
10:51:36 5 it says there's a peak that's 4 and 5.  
10:51:47 6 And in the results page we will be able  
10:51:49 7 to find what result it gave for this  
10:51:57 8 integration.

10:51:59 9 MR. RIVKIN: But you also do  
10:52:01 10 some manual integration, right?

10:52:03 11 THE WITNESS: Yes.

10:52:05 12 MR. RIVKIN: And how do you  
10:52:10 13 -- when you have two peaks that are so  
10:52:13 14 close together, how would you decide  
10:52:14 15 how you would adjust what the machine  
10:52:17 16 has done?

10:52:25 17 THE WITNESS: In this case I  
10:52:40 18 personally would not decide, I would  
10:52:46 19 not decide the integration of the peak.  
10:52:52 20 If it was a molecule of interest and we  
10:52:54 21 had to give the integration value for  
10:52:56 22 the peak, we wouldn't -- we wouldn't  
10:53:03 23 give a value, we'd simply say there was  
10:53:06 24 interference, that we couldn't do it,  
10:53:08 25 and that we didn't have a precise value

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10:53:10 2 for the peak.

10:53:12 3 MR. RIVKIN: So you would  
10:53:13 4 not consider the results for whatever  
10:53:16 5 molecule happened to be 4 and 5 to be a  
10:53:20 6 valid result on this IRMS  
10:53:24 7 chromatograph?

10:53:26 8 THE WITNESS: No, in this  
10:53:40 9 case I would not.

10:53:43 10 MR. RIVKIN: Thank you.

10:53:45 11 Q. Could you next identify the  
10:53:46 12 11 ketoetio. And when you do so,  
10:53:50 13 identify it both in the GC/MS as well  
10:53:53 14 as the blank urine -- identify it in  
10:54:01 15 the IRMS.

10:54:10 16 MR. DUNN: May we have the  
10:54:15 17 pages again, I can't see them on the  
10:54:17 18 screen that we're viewing.

10:54:25 19 MR. SUH: 1339 would be the  
10:54:27 20 GC/MS and 1362 would be the IRMS.

10:54:45 21 MR. YOUNG: I think it's  
10:54:46 22 fair if the witness is looking at a  
10:54:47 23 page that we all look at the same page  
10:54:50 24 the witness is looking at. I mean what  
10:54:54 25 happens is the witness is looking at a

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10:54:56 2 full document and what we get is a  
10:54:58 3 cutout blowup. If the witness needs or  
10:55:01 4 the panel needs something blown up,  
10:55:03 5 that's fine.

10:55:23 6 THE WITNESS: Please could  
10:55:24 7 we have this blown up.

10:55:29 8 A. So on the GC/MS it indicated  
10:55:38 9 that the 11 ketoetio is in this area.  
10:55:47 10 So I'm going to look along the profile  
10:55:51 11 of this chromatograph in this area --

10:55:56 12 MR. RIVKIN: Just so the  
10:55:57 13 record is clear, in which chromatograph?

10:56:03 14 A. That is the GC -- yes, the  
10:56:10 15 upper one is the GC/MS chromatograph.

10:56:14 16 MR. RIVKIN: And the lower  
10:56:14 17 one is the IRMS?

10:56:16 18 THE WITNESS: Yes, absolutely.

10:56:17 19 MR. RIVKIN: So that I  
10:56:18 20 understand your last answer, you  
10:56:20 21 pointed to where the 11 ketoetio was in  
10:56:26 22 the GC/MS and then you pointed to the  
10:56:28 23 IRMS and say you would look in the same  
10:56:30 24 area; is that right?

10:56:33 25 THE WITNESS: Yes, that's

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10:56:54 2 right.

10:56:54 3 A. So then I look at the  
10:57:01 4 results, I look at the different  
10:57:02 5 retention times of the products that  
10:57:05 6 are being analyzed. So now we're  
10:57:19 7 looking at Page LNDD 1363. I just need  
10:57:39 8 the retention times down here. First  
10:58:00 9 of all, I look for the retention time  
10:58:02 10 on the internal standard which comes  
10:58:03 11 out at about 870 seconds. Next I look  
10:58:17 12 at my results page, Page 1390. And  
10:58:51 13 here I have previously identified the  
10:58:54 14 internal standard on the blank urine  
10:58:56 15 which was 870. Then I identified the  
10:59:07 16 standard on the fraction -- in the  
10:59:21 17 fraction of the sample here which was  
10:59:24 18 882, and then 1,496 on the 11 ketoetio.  
10:59:46 19 And after making the comparison of the  
10:59:52 20 area where the product came out in  
10:59:56 21 GC/MS and IRMS I look at the retention  
11:00:03 22 time and I identify the 11 ketoetio, 11  
11:00:18 23 ketoetio.

11:00:20 24 And as we can see from the  
11:00:30 25 urine blank and the sample the peaks

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11:00:36 2 were correctly identified. As you can  
11:00:44 3 see from the retention times and the  
11:00:46 4 analyte as well. And at that point  
11:00:54 5 then we can make the comparison between  
11:00:56 6 the sample and the blank urine.

11:01:03 7 Q. So you never just pattern  
11:01:07 8 matched between the GC/MS and the IRMS  
11:01:11 9 chromatograms in the sample, correct,  
11:01:26 10 the sample?

11:01:31 11 A. Yes, I do a comparison on  
11:01:52 12 the sample.

11:01:53 13 Q. Let me ask it to you this  
11:01:55 14 way.

11:01:56 15 MR. SUH: Todd, can you pull  
11:01:58 16 up the GC/MS chromatogram on 1339 and  
11:02:02 17 the matching IRMS chromatogram on 1362.

11:02:11 18 Q. Can you match the patterns  
11:02:13 19 on the two chromatograms without any  
11:02:16 20 other information? For the 11  
11:02:22 21 ketoetio, can you match the peak  
11:02:24 22 patterns?

11:02:38 23 A. Only the peak patterns?

11:02:41 24 Q. Yes.

11:02:42 25 A. In this case, it would be



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11:02:46 2 difficult. I really can't answer you.

11:02:54 3 I'd need more information.

11:02:57 4 Q. And specifically the

11:02:58 5 information you would need is the

11:02:59 6 retention time information of the 11

11:03:03 7 ketoetio; is that right?

11:03:06 8 A. No. In fact, I would need

11:03:20 9 the see the profile of the zone we're

11:03:23 10 interested in.

11:03:26 11 Q. One more thing. You said

11:03:27 12 that you identified the internal

11:03:30 13 standard.

11:03:32 14 MR. SUH: Todd, if you could

11:03:33 15 pull up LNDD 1363. And if you could

11:03:41 16 blow up that graphic chart which is the

11:03:46 17 one that has the retention times in it

11:03:49 18 for the sample. That one right there.

11:03:53 19 Make that a little bit larger and

11:03:56 20 highlight line 2 and 3.

11:04:02 21 Q. You said you were able to

11:04:03 22 identify the internal standard because

11:04:05 23 it came out approximately at 870

11:04:08 24 seconds per your procedure, right?

11:04:12 25 A. Yes, we use the internal

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11:04:32 2 standard as a reference for the  
11:04:34 3 retention time. So both in the blank  
11:04:41 4 urine and in the sample they should  
11:04:44 5 have the same value.

11:04:46 6 Q. And your -- before you turn  
11:04:54 7 to your blank urine you decided that  
11:04:56 8 881.9, the peak number 3 at 881.9 is  
11:05:01 9 your internal standard because it's  
11:05:03 10 approximately 870 seconds, right?

11:05:31 11 THE INTERPRETER: I'm  
11:05:32 12 repeating the question.

11:05:59 13 A. Yes.

11:06:00 14 Q. Just a few more questions.

11:06:06 15 MR. SUH: Todd, we can take  
11:06:09 16 those figures down.

11:06:10 17 Q. How many IRMS tests did  
11:06:14 18 Claire Frelat perform on athlete  
11:06:18 19 samples in 2006?

11:06:22 20 A. I really don't know the  
11:06:36 21 exact number.

11:06:39 22 Q. With respect to your  
11:06:40 23 positivity criteria for the IRMS test  
11:06:43 24 in which LNDD is willing to declare an  
11:06:49 25 adverse analytic finding on one out of

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11:06:52 2 four metabolites, let me ask you what  
11:07:25 3 validation studies did LNDD conduct  
11:07:29 4 with respect to that positivity  
11:07:30 5 criteria?

11:07:31 6 A. The positivity criteria 3  
11:07:58 7 for a thousand, three for 1,000.

11:08:09 8 MR. SUH: I think she might be  
11:08:10 9 -- Mr. Paulsson, perhaps you might --

11:08:13 10 MR. PAULSSON: The translation  
11:08:14 11 is fine.

11:08:19 12 Q. That's not exactly my  
11:08:21 13 question. My question is what validation  
11:08:23 14 studies were conducted with respect to  
11:08:26 15 determining that LNDD could -- with  
11:08:30 16 respect to LNDD's positivity criteria of  
11:08:33 17 one out of four metabolites?

11:08:56 18 A. To my knowledge, no  
11:09:07 19 validation was done. LNDD inspects  
11:09:19 20 our --

11:09:23 21 THE INTERPRETER: I have to  
11:09:24 22 ask her to repeat that.

11:09:32 23 A. LNDD respects the requirements  
11:09:39 24 of our technical documentation from WADA.

11:09:49 25 MR. SUH: No further

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11:09:50 2 questions.

11:09:55 3 THE PRESIDENT: Mr. Dunn.

11:09:57 4 MR. DUNN: I think Mr.

11:09:58 5 Young, if it's okay, is going to begin

11:10:01 6 and I will follow-up. There's one

11:10:04 7 subject matter that he is planning to

11:10:08 8 address if that's okay with the panel.

11:10:11 9 MR. SUH: We would object as

11:10:16 10 he started this proceeding.

11:10:17 11 MR. DUNN: That's fine, I'll

11:10:19 12 do it all.

11:10:20 13 MR. SUH: Actually, we would

11:10:21 14 request that Mr. Dunn be required to do

11:10:23 15 the cross examination.

11:10:34 16 THE PRESIDENT: Mr. Young

11:10:35 17 may proceed but he only will conduct

11:10:44 18 the reexamination.

11:10:59 19 REDIRECT EXAMINATION

11:11:16 20 BY MR. YOUNG:

11:11:16 21 Q. Ms. Mongongu, in the

11:11:33 22 laboratory today there are two

11:11:39 23 instruments, the IsoPrime 1 and the

11:11:41 24 IsoPrime 2; is that right?

11:11:46 25 A. There are actually three.

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11:12:00 2 Q. We had a question earlier  
11:12:03 3 why it was that Mr. Landis' sample was  
11:12:09 4 analyzed on the IsoPrime 1 instead of  
11:12:14 5 the IsoPrime 2 instrument.

11:12:39 6 A. In fact, at the time the  
11:12:40 7 analysis was done, the IsoPrime 2 had  
11:12:43 8 not yet been validated. Only the  
11:12:50 9 IsoPrime 1 had been validated, so we  
11:12:53 10 did analyses using that.

11:12:56 11 Q. Thank you. What I would  
11:13:01 12 like to do is to have you take us  
11:13:05 13 through how you identified the peaks in  
11:13:13 14 fraction 3 of the blank urine for Mr.  
11:13:20 15 Landis' sample and the sample 995474.  
11:14:00 16 First, what are the peaks that we care  
11:14:05 17 about for purposes of IRMS analysis in  
11:14:11 18 fraction 3?

11:14:13 19 A. Well, there are the  
11:14:33 20 testosterone metabolites in 5-beta.  
11:14:41 21 And 5-alpha androstanediol. And the  
11:14:57 22 Pdol which is in fact used as a  
11:15:06 23 compound which is the endogenous  
11:15:14 24 compound used for reference.

11:15:22 25 Q. So using the documentation

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11:15:24 2 package, could you take for my benefit  
11:15:27 3 and for the panel's benefit, take us  
11:15:30 4 through and then you can tell the  
11:15:37 5 operator if you want a full page up on  
11:15:41 6 the screen or if you want to blow up a  
11:15:44 7 page, but take us step by step.

11:16:18 8 MS. SLOAN: Just for the  
11:16:19 9 record, it looks like right now she's  
11:16:21 10 in Exhibit 24. She can confirm that.

11:16:51 11 A. I need Page USADA 0142.

11:17:01 12 MR. BARNETT: Can I just  
11:17:02 13 raise one technical issue. Our ability  
11:17:04 14 to blow up documents side by side is  
11:17:06 15 not as good, candidly, as theirs is  
11:17:10 16 using Todd's proprietary software.  
11:17:12 17 Would it be okay for the consistency of  
11:17:15 18 the record and would Mr. Suh have any  
11:17:16 19 objection if we allow Todd to pull up  
11:17:19 20 the documents in this portion of the  
11:17:21 21 testimony?

11:17:22 22 MR. SUH: We have no  
11:17:23 23 objection.

11:17:23 24 THE PRESIDENT: Thank you,  
11:17:24 25 that's very helpful.

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11:17:27 2 MR. RIVKIN: He thought he  
11:17:28 3 was going to get a break.

11:17:32 4 MR. BARNETT: The page  
11:17:33 5 number again?

11:17:35 6 THE INTERPRETER: It was  
11:17:35 7 Page 0142.

11:17:55 8 A. And also Page USADA 0170.

11:18:27 9 Q. A question: Are you  
11:18:29 10 starting at the identification of the  
11:18:40 11 composition of either the sample or  
11:18:44 12 blank urine using GC/MS?

11:18:48 13 A. Yes. Okay, yes, we start by  
11:19:19 14 -- first of all, we start by identifying  
11:19:21 15 the analytes and the identification is  
11:19:27 16 done using a standard which contains the  
11:19:34 17 molecules of interest.

11:19:35 18 Q. And what page is that on?

11:19:39 19 A. USADA Page 0130. So here  
11:20:07 20 you have all the information referring  
11:20:09 21 to the analysis of the components --  
11:20:15 22 compounds.

11:20:16 23 THE INTERPRETER: I'm sorry.

11:20:18 24 A. Which are made using a pure  
11:20:21 25 standard. Next we go back to Page

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11:20:35 2 USADA 0142.

11:20:42 3 Q. Could you go back to 130 for  
11:20:45 4 just a second.

11:20:53 5 A. Yes, excuse me.

11:20:54 6 Q. So you have retention times  
11:20:56 7 down in this box with the name of the  
11:21:10 8 particular metabolite here in the top  
11:21:15 9 box?

11:21:18 10 A. Yes, that's right.

11:21:26 11 Q. Is it true that we know  
11:21:28 12 because they're standards, that every  
11:21:32 13 single one of these peaks is what is  
11:21:37 14 listed down here?

11:21:56 15 A. Yes, absolutely.

11:21:57 16 Q. And then is there a second  
11:21:59 17 part of this process, and tell me if  
11:22:01 18 I'm getting ahead --

11:22:11 19 A. Yes.

11:22:12 20 Q. -- where you do a further  
11:22:13 21 confirmation using the mass  
11:22:17 22 spectrometry?

11:22:26 23 A. Yes.

11:22:27 24 Q. So please continue.

11:22:34 25 A. It is also we have the



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11:22:35 2 retention times here. And the  
11:22:40 3 information that came out of the mass  
11:22:42 4 spectrometry is here. So first of all,  
11:22:51 5 we put this information in so that we  
11:22:53 6 can use it as a reference.

11:22:54 7 If you look at USADA 049,  
11:23:20 8 Page 149 to -- Page 0149 to Page 0151.

11:23:48 9 Q. And what do you do there?

11:23:51 10 A. So here we're going to put  
11:24:01 11 everything that relates to the analysis  
11:24:03 12 of the standard. And here for all the  
11:24:08 13 molecules of interest you have  
11:24:13 14 retention times, the relative retention  
11:24:16 15 times, and the information you see here  
11:24:25 16 which is from the mass spectrometry.

11:24:31 17 And here you have the high and low  
11:24:33 18 tolerances which respect the  
11:24:40 19 identification criteria which are  
11:24:45 20 described in the AMA technical  
11:24:49 21 documentation. TD2003DCR --  
11:25:18 22 TD2005IDCR.

11:25:21 23 Q. What do you do next?

11:25:32 24 A. Next I take the information  
11:25:33 25 I have for the samples and which came

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11:25:38 2 out of the GC/MS analysis and I put the  
11:25:46 3 information obtained here so you have  
11:25:51 4 the product retention time, the product  
11:25:56 5 relative retention time and the  
11:26:04 6 relative abundances of the qualifying  
11:26:16 7 zones.

11:26:17 8 THE INTERPRETER: I'm sorry,  
11:26:17 9 the qualifying ions.

11:26:32 10 A. And you have over here the  
11:26:34 11 high and low tolerances and the results  
11:26:36 12 must be within those tolerances. And  
11:26:42 13 here you indicate yes or no, whether  
11:26:44 14 the tolerances are consistent, relative  
11:26:53 15 retention time, and the abundance of  
11:27:00 16 the ions. And this is in fact the  
11:27:07 17 sheet that allows us to identify and  
11:27:10 18 characterize the products.

11:27:12 19 Q. And is there a chromatogram  
11:27:16 20 that comes from the GC/MS analysis of  
11:27:20 21 the athlete's sample?

11:27:34 22 THE INTERPRETER: I'm just  
11:27:34 23 going to repeat the question.

11:27:37 24 A. Yes.

11:27:43 25 Q. Could you find that, please?

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11:27:45 2 A. Page 0134. So this is the  
11:28:17 3 result of the GC/MS analysis of  
11:28:22 4 fraction 1 of the sample.

11:28:26 5 Q. I'm interested in fraction  
11:28:34 6 3.

11:28:34 7 A. Well that's 0144.

11:28:52 8 Q. And comparing the data on  
11:28:56 9 USADA 0144 in terms of retention times  
11:29:04 10 and masses, does this confirm the  
11:29:10 11 identity of the peaks in 0144 with  
11:29:17 12 respect to 5-beta, 5-alpha, the  
11:29:23 13 internal standard, and Pdiol?

11:29:28 14 A. Yes.

11:29:53 15 Q. Next could you go to the  
11:30:02 16 page that has the GC/MS chromatogram  
11:30:08 17 for the blank urine in fraction 3.

11:30:26 18 A. Yes, that's USADA 0142.

11:30:40 19 Q. And do the retention times  
11:30:46 20 and mass signals for this blank urine  
11:30:56 21 match to the standard?

11:30:59 22 A. If we make a comparison of  
11:31:23 23 the standard page, yes.

11:31:25 24 Q. And go back to the standard  
11:31:27 25 page. Which one is that?

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11:31:34 2 A. USADA 0130.

11:31:52 3 Q. And so at this point you  
11:31:54 4 have confirmed, positively confirmed  
11:32:01 5 the identity of the four peaks we care  
11:32:05 6 about in fraction 3 on the GC/MS for  
11:32:11 7 both the athlete's sample and the blank  
11:32:15 8 urine?

11:32:16 9 A. Yes, that's correct.

11:32:35 10 Q. Can we go to the page that  
11:32:38 11 shows the athlete's sample in fraction  
11:32:43 12 3.

11:32:51 13 A. Yes, that's Page USADA 0144.

11:33:02 14 Q. And can you identify the  
11:33:08 15 peak that has been positively confirmed  
11:33:12 16 as the internal standard in this  
11:33:14 17 chromatogram?

11:33:16 18 A. So the internal standard is  
11:33:41 19 10.67.

11:33:42 20 Q. And which of those peaks is  
11:33:48 21 that?

11:33:48 22 A. It's this one.

11:33:53 23 MR. YOUNG: Could you  
11:33:54 24 highlight that please, Todd. Just put  
11:33:57 25 some sort of mark on it. Thank you.

1 CYNTHIA MONGONGU - REDIRECT

11:34:00 2 Q. And can you identify the  
11:34:02 3 peak that has been positively confirmed  
11:34:05 4 as 5-beta?

11:34:17 5 A. 5-beta would be 15.10. So  
11:34:22 6 it's this peak.

11:34:25 7 MR. YOUNG: Could you mark  
11:34:26 8 that, please, Todd.

11:34:29 9 Q. And could you confirm --  
11:34:32 10 could you identify the peak that has  
11:34:34 11 been positively identified as 5-alpha?

11:34:38 12 A. That would be 15.48 and it's  
11:34:55 13 the peak just here.

11:34:58 14 Q. And could you identify the  
11:35:01 15 peak that's been positively identified  
11:35:03 16 as Pdiol?

11:35:17 17 A. So the Pdiol would be 19.06,  
11:35:23 18 19.06 and we're looking at this peak  
11:35:28 19 here.

11:35:32 20 Q. Could we go back to the page  
11:35:35 21 with the blank urine.

11:35:39 22 MR. RIVKIN: Could I just  
11:35:39 23 ask one quick question?

11:35:41 24 MR. YOUNG: Sure.

11:35:43 25 MR. RIVKIN: The names of

1 CYNTHIA MONGONGU - REDIRECT

11:35:44 2 the substances in the left-hand column,  
11:35:46 3 are those entered by the computer or  
11:35:48 4 are those typed in by you or the  
11:35:51 5 operator?

11:35:54 6 THE WITNESS: No, the  
11:36:15 7 computer generates that.

11:36:17 8 MR. RIVKIN: The computer  
11:36:18 9 generates the information in the  
11:36:25 10 right-hand columns as well?

11:36:29 11 THE WITNESS: Yes. In fact  
11:36:36 12 when we do the GC identification we use  
11:36:42 13 the same method to identify the peaks  
11:36:48 14 -- we use the same method to integrate  
11:36:52 15 the peaks and then the report is  
11:36:58 16 generated after that.

11:37:00 17 MR. RIVKIN: Thank you.

11:37:07 18 Q. So now that we have  
11:37:10 19 positively identified the four peaks we  
11:37:13 20 care about in both the athlete's sample  
11:37:17 21 and the blank urine, what do you do  
11:37:21 22 next?

11:37:22 23 A. Next I take the  
11:37:43 24 chromatograms from the IRMS. For the  
11:38:07 25 blank urine it's USADA Page 0170. And

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11:38:20 2 I do a matching with the GC/MS profile  
11:38:28 3 0142.

11:38:38 4 Q. Is there other data on the  
11:38:40 5 screen that you use in connection with  
11:38:51 6 USADA 170 in matching, or do you just  
11:38:54 7 use that document?

11:38:59 8 A. I also use the data  
11:39:26 9 processing results number 0169.

11:39:32 10 MR. YOUNG: Todd, could we  
11:39:33 11 put that up under the chromatogram,  
11:39:35 12 please.

11:39:39 13 Q. And which part of that, Ms.  
11:39:41 14 Mongongu, would you use?

11:39:52 15 A. This part here.

11:39:54 16 MR. YOUNG: So Todd, could  
11:39:57 17 we please put that up under the IRMS  
11:40:00 18 chromatogram at 170. Could you put the  
11:40:08 19 chromatogram on top and then those four  
11:40:10 20 at the bottom or that group of data at  
11:40:16 21 the bottom, please.

11:40:41 22 A. And the GC/MS chromatogram,  
11:40:53 23 USADA Page 0142.

11:41:12 24 Q. And what are you comparing  
11:41:16 25 0142 with?

1 CYNTHIA MONGONGU - REDIRECT

11:41:23 2 A. The chromatographic profile  
11:41:36 3 here with USADA 0170.

11:41:44 4 MR. YOUNG: Could we put  
11:41:46 5 those side by side and then could you  
11:41:48 6 put, Todd, the data under 170. It's  
11:41:51 7 the data that was at the bottom of 169.  
11:42:03 8 Can you do that on a side by side? You  
11:42:05 9 can't do three at once? You're good,  
11:42:16 10 Todd. That's fine.

11:42:23 11 Q. Then on the page that you  
11:42:24 12 have on the computer you have the data  
11:42:26 13 under the chromatogram; is that right?

11:42:28 14 A. Yes. Can we highlight part  
11:42:47 15 of the chromatograph.

11:42:52 16 Q. Show Todd what you want him  
11:42:54 17 to highlight. Just point to it.  
11:42:57 18 Highlight or expand.

11:43:01 19 A. Yes, that's it. Thank you.  
11:43:10 20 So we had previously identified the  
11:43:12 21 molecules.

11:43:13 22 Q. Can you quickly tell Todd  
11:43:15 23 where to put the highlights on those.

11:43:28 24 A. That's the internal  
11:43:40 25 standard. The 5-beta is there.



1 CYNTHIA MONGONGU - REDIRECT

11:43:47 2 5-alpha's here. And Pdiol is there.

11:43:57 3 Q. Okay. What do you do next?

11:44:02 4 A. And here's the IRMS

11:44:09 5 chromatographic profile. The internal

11:44:17 6 standard retention times of course

11:44:20 7 which are reference. And as you can

11:44:29 8 see it's exactly the same profile, so

11:44:32 9 you'll have the 5-beta here.

11:44:36 10 MR. YOUNG: Could you

11:44:36 11 highlight that, please.

11:44:41 12 A. You're going to have the

11:44:43 13 5-alpha here, which is the peak that

11:44:48 14 comes after the 5-beta. And here's the

11:44:56 15 Pdiol. And the internal standard is

11:45:02 16 here.

11:45:16 17 After identifying these I

11:45:18 18 then get the retention times. And then

11:45:26 19 I enter the calculation into my log.

11:45:32 20 Q. And that log is what page?

11:45:42 21 Just tell me before we put it up real

11:45:45 22 quick.

11:46:17 23 MR. RIVKIN: I have a

11:46:18 24 question before she leaves Page 172

11:46:20 25 after she answers this question.

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11:46:25 2 A. Sorry, I'm looking for it.

11:47:20 3 Q. To save time, let me ask a  
11:47:22 4 question and then we'll let Mr. Rivkin  
11:47:25 5 ask a question on this and then we'll  
11:47:28 6 go back to that log.

11:47:35 7 When you did the Mix Cal  
11:47:51 8 Acetate on the IRMS, did that also tell  
11:48:02 9 you the retention time for 5-beta?

11:48:07 10 A. Yes, because the 5-beta is  
11:48:25 11 also in the Mix Cal Acetate we can get  
11:48:27 12 the retention time.

11:48:30 13 Q. And could you also get the  
11:48:33 14 retention time for the compound that  
11:48:39 15 you use as an internal standard which  
11:48:44 16 is the 5-alpha androstanol acetate?

11:48:53 17 A. Yes.

11:49:14 18 MR. YOUNG: Before I leave  
11:49:15 19 this, Mr. Rivkin, did you have a  
11:49:16 20 question?

11:49:17 21 MR. RIVKIN: On 170 -- Todd,  
11:49:29 22 if you could move this up a second.  
11:49:38 23 This says manual DP. So does that mean  
11:49:44 24 these results were manually integrated?

11:49:49 25 THE WITNESS: No, not at

1 CYNTHIA MONGONGU - REDIRECT

11:49:51 2 all. No, it -- reprocessing is called  
11:50:00 3 manual DP.

11:50:02 4 MR. RIVKIN: Is there a way  
11:50:03 5 to tell looking at one of these pages  
11:50:05 6 whether you have manually integrated  
11:50:07 7 the results or not?

11:50:09 8 THE WITNESS: No.

11:50:20 9 MR. RIVKIN: I just want to  
11:50:22 10 make sure I understand what these numbers  
11:50:24 11 are that the computer has measured  
11:50:29 12 because they aren't peak height because  
11:50:37 13 you have a lower number higher than a  
11:50:40 14 higher number and here you have other  
11:50:43 15 numbers that don't match the peak height.  
11:50:46 16 So exactly what are these numbers  
11:50:48 17 measuring?

11:50:50 18 THE WITNESS: It's the  
11:51:29 19 values -- it's the isotopic values of  
11:51:37 20 the peaks.

11:51:42 21 MR. RIVKIN: Measured by the  
11:51:43 22 area of the peak, the internal area?

11:51:47 23 THE WITNESS: Measured, yes,  
11:51:56 24 using good integration of the peak.

11:51:59 25 MR. RIVKIN: Basically the

1 CYNTHIA MONGONGU - REDIRECT

11:52:01 2 number of ions that create that peak?

11:52:03 3 THE WITNESS: It's the  
11:52:14 4 carbon 12/carbon 13 ratio of the peak.

11:52:19 5 MR. RIVKIN: Thank you.

11:52:21 6 Q. And to follow up so  
11:52:23 7 everyone's clear, Ms. Mongongu, does  
11:52:26 8 the delta value have anything to do  
11:52:30 9 with the height of the peak?

11:52:36 10 A. No, it's simply a function  
11:52:54 11 of the relation -- carbon 12/carbon 13  
11:53:00 12 relationship.

11:53:01 13 MR. RIVKIN: Of the ions  
11:53:03 14 that are creating that particular peak?

11:53:06 15 THE WITNESS: Yes.

11:53:13 16 Q. In the process what do you  
11:53:15 17 do next?

11:53:16 18 A. I still can't find the sheet  
11:53:25 19 we were looking for.

11:53:33 20 THE PRESIDENT: Mr. Young,  
11:53:34 21 it may be that we should take the  
11:53:36 22 morning break. We're due for a break  
11:53:38 23 and perhaps over the break the witness  
11:53:41 24 can find the document she's looking  
11:53:43 25 for.

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11:53:44 2 MR. YOUNG: Okay.

11:53:46 3 THE PRESIDENT: We'll take  
11:53:47 4 15 minutes now.

11:53:48 5 (A recess was taken.)

12:20:35 6 THE PRESIDENT: Please  
12:20:37 7 continue, Mr. Young.

12:20:39 8 MR. YOUNG: I have to  
12:20:40 9 apologize to the witness. She was  
12:20:41 10 looking in the documentation package  
12:20:44 11 for the page where she said she  
12:20:47 12 recorded the retention time data from  
12:20:51 13 fraction 3 of the athlete's sample on  
12:20:57 14 IRMS and she was having trouble finding  
12:20:59 15 it. The reason she was having trouble  
12:21:01 16 finding it was because that page, Page  
12:21:04 17 185 was missing from the documentation  
12:21:07 18 package that we had handed her.

12:21:13 19 Q. Ms. Mongongu, was Page 185  
12:21:16 20 the page you were looking for?

12:21:18 21 A. Yes, that's it.

12:21:45 22 Q. We've gone through the steps  
12:21:48 23 of comparing the GC/MS of the sample  
12:21:51 24 with the GC/MS -- start again.

12:21:56 25 We've gone through the step

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12:21:58 2 of comparing the GC/MS of the sample  
12:22:02 3 with the IRMS of the sample. What did  
12:22:06 4 you do in the way of comparing the  
12:22:11 5 GC/MS of the blank urine to the IRMS of  
12:22:15 6 the blank urine?

12:22:16 7 A. Are you asking me how I  
12:22:51 8 identify the peaks, GC/MS compared to  
12:22:56 9 IRMS, is that what you're looking for?

12:22:58 10 Q. In the blank urine.

12:23:11 11 A. Okay, yes, well, as I said  
12:23:13 12 before, once I've identified the  
12:23:15 13 product using GC/MS then I look at the  
12:23:23 14 IRMS chromatogram.

12:23:25 15 Q. First could you tell us  
12:23:26 16 which page is the blank urine fraction  
12:23:31 17 3 GC/MS chromatogram?

12:23:49 18 A. It's 0142 USADA.

12:23:58 19 Q. And I believe you said  
12:24:06 20 earlier that we know for sure the  
12:24:11 21 identity of the peaks in this  
12:24:13 22 chromatogram because the retention  
12:24:19 23 times and masses matched to the  
12:24:20 24 standard; is that correct?

12:24:32 25 A. Yes, that's correct.

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12:24:39 2 Q. So what do you compare Page  
12:24:46 3 142 with?

12:24:50 4 A. With Page 0170.

12:25:10 5 Q. And again, when you look at  
12:25:13 6 Page 0170 do you also have the data  
12:25:17 7 available that's on Page 0169?

12:25:23 8 A. Yes, that's correct.

12:25:42 9 MR. YOUNG: Could you put  
12:25:43 10 the previous one back up, please, Todd.

12:25:47 11 Q. And for the panel's benefit  
12:25:49 12 could you please highlight those peaks  
12:25:57 13 which have -- could you please  
12:25:58 14 highlight the peak that has been  
12:26:00 15 positively identified as the internal  
12:26:02 16 standard on Page 142.

12:26:27 17 A. The first peak here is the  
12:26:29 18 internal standard.

12:26:30 19 MR. YOUNG: Todd, could we  
12:26:32 20 make the other highlights go away,  
12:26:34 21 please.

12:26:42 22 Q. And could you show Todd  
12:26:43 23 again which peak is the internal  
12:26:45 24 standard.

12:26:53 25 A. The internal standard is

1 CYNTHIA MONGONGU - REDIRECT

12:26:55 2 this peak here which is 10.68.

12:27:00 3 Q. And which peak has been  
12:27:03 4 positively identified as 5-beta?

12:27:16 5 A. It's the peak 15.17.

12:27:22 6 Q. And which peak has been  
12:27:23 7 positively identified as 5-alpha?

12:27:30 8 A. The peak which goes up to  
12:27:35 9 15.51.

12:27:38 10 Q. And which peak has been  
12:27:40 11 positively identified as Pd1ol?

12:27:45 12 A. It's the peak at 19.14, this  
12:27:56 13 one.

12:27:58 14 Q. And how do you go about  
12:28:00 15 using this GC/MS data for the blank  
12:28:07 16 urine to identify the four peaks we  
12:28:12 17 care about in the IRMS chromatogram of  
12:28:18 18 the blank urine?

12:28:20 19 A. I find the internal standard  
12:28:43 20 on the IRMS chromatograph by looking at  
12:28:53 21 the retention times that we got for the  
12:28:56 22 molecules.

12:29:00 23 Q. And which is that?

12:29:02 24 A. Page 0169.

12:29:13 25 Q. And can you identify that



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12:29:14 2 peak?

12:29:19 3 A. The internal standard which  
12:29:24 4 has to be around 860 and which here is  
12:29:37 5 867.4.

12:29:52 6 Q. And does that correspond to  
12:29:53 7 the retention time for that same  
12:29:56 8 substance in the Mix Cal Acetate?

12:29:59 9 A. I'm going to look at the Mix  
12:30:16 10 Cal Acetate sheet to find out. If you  
12:30:26 11 look at USADA Page 181 and 0182 the  
12:30:45 12 first peak you can see here which is  
12:30:51 13 the -- is the 5-alpha androstanol and  
12:31:00 14 you can see here that it is 866.6.

12:31:07 15 Q. And what time did that peak  
12:31:10 16 elute in the blank urine?

12:31:20 17 A. If I go to Page 0169. Could  
12:31:40 18 we zoom in on this portion that I'm  
12:31:42 19 indicating. Thanks. The same peak  
12:31:50 20 here goes to 867.4, elutes at 867.4.

12:31:59 21 Q. And with respect to the  
12:32:02 22 5-beta in the Mix Cal Acetate, how does  
12:32:07 23 the retention time of that peak compare  
12:32:11 24 to what you've identified as the 5-beta  
12:32:16 25 in the blank urine?

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12:32:19 2 A. Mix Cal Acetate is Page  
12:33:07 3 0181. You have the third peak which  
12:33:08 4 here goes to 1302 which corresponds to  
12:33:28 5 5-beta.

12:33:28 6 MR. YOUNG: Could you  
12:33:29 7 highlight that, please, Todd, just the  
12:33:32 8 1302. Thanks.

12:33:33 9 Q. So we know that's 5-beta in  
12:33:36 10 the Mix Cal Acetate?

12:33:47 11 A. Yes.

12:33:47 12 Q. And what is the retention  
12:33:48 13 time for 5-beta in fraction 3 of the  
12:33:54 14 athlete's sample -- excuse me, of the  
12:33:57 15 blank urine?

12:33:59 16 A. In the blank urine it's the  
12:34:22 17 peak which corresponds to 1306.2.

12:34:28 18 MR. YOUNG: Next could we  
12:34:30 19 put back up the pages where we have the  
12:34:32 20 chromatogram of the GC/MS of the blank  
12:34:41 21 urine and the IRMS of the blank urine.

12:34:54 22 Q. So you identified with the  
12:34:57 23 yellow the internal standard in the  
12:35:00 24 IRMS chromatogram; is that right?

12:35:12 25 A. Yes, that's correct.

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12:35:13 2 Q. And then you've identified  
12:35:16 3 the 5-beta. And could you tell Todd  
12:35:21 4 where to highlight that.

12:35:35 5 A. The 5-beta is up there and  
12:35:37 6 below it's this peak here.

12:35:41 7 Q. And where is the 5-alpha in  
12:35:45 8 the IRMS chromatogram?

12:35:47 9 A. Right after the 5-beta.

12:36:01 10 Q. And where is the Pdiol?

12:36:07 11 A. Here.

12:36:14 12 Q. Next you said that you also  
12:36:17 13 compared the IRMS for the blank urine  
12:36:24 14 with the IRMS for the athlete's sample.  
12:36:28 15 How did you do that?

12:36:30 16 A. So next I take the  
12:36:52 17 chromatogram for the IRMS -- the IRMS  
12:36:55 18 for the sample which is 0173.

12:37:14 19 MR. YOUNG: Todd, could you  
12:37:16 20 leave 0170 up the way it was. Could  
12:37:24 21 you go back to the previous slide. If  
12:37:51 22 you leave 0170 and next to that --

12:38:00 23 Q. Ms. Mongongu, where is the  
12:38:05 24 retention time data that corresponds to  
12:38:09 25 0170 found?

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12:38:13 2 A. It's on Page 0169.

12:38:41 3 MR. YOUNG: Todd, would it  
12:38:42 4 be possible to put that data under  
12:38:48 5 0170.

12:39:09 6 Q. So on the right-hand side we  
12:39:11 7 have the IRMS chromatogram and  
12:39:17 8 retention time for the blank urine; is  
12:39:21 9 that right?

12:39:21 10 A. Yes, that's correct.

12:39:34 11 Q. Without changing any slides,  
12:39:38 12 thank you, what page would we go to to  
12:39:43 13 find the IRMS chromatogram for fraction  
12:39:49 14 3 of the athlete's sample?

12:39:51 15 A. 0173.

12:40:20 16 MR. YOUNG: Would it be  
12:40:21 17 possible, Todd, for us to put 0173 on  
12:40:24 18 the top left?

12:40:33 19 MR. THOMPSON: No.

12:40:42 20 Q. And the dataset that goes  
12:40:44 21 with 0173 is found on which page?

12:41:00 22 THE INTERPRETER: I'm sorry,  
12:41:01 23 which number?

12:41:02 24 Q. The dataset for the  
12:41:03 25 chromatogram at 0173.

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12:41:13 2 A. It's 0172.

12:41:20 3 MR. YOUNG: And Todd, would  
12:41:21 4 it be possible for us to compare the  
12:41:22 5 dataset on 0172 with the dataset on  
12:41:28 6 01 --

12:41:36 7 Q. Again, the dataset for the  
12:41:38 8 blank urine in IRMS is on what page?

12:41:47 9 A. 0169.

12:41:57 10 Q. The internal standard is --

12:42:08 11 MR. YOUNG: And above, would  
12:42:08 12 it be possible, Todd, to put the  
12:42:13 13 chromatogram, I know we can't do both,  
12:42:15 14 but the chromatogram of either the  
12:42:18 15 blank urine or the athlete's urine on  
12:42:20 16 top of either one of these?

12:42:23 17 MR. THOMPSON: No.

12:42:43 18 Q. So the chromatograms that  
12:42:44 19 these two datasets correspond to are  
12:42:47 20 found at what pages?

12:42:50 21 A. For the blank urine it's  
12:43:04 22 Page 0170. And for the sample it's  
12:43:13 23 0173.

12:43:20 24 Q. So when you said that as  
12:43:22 25 part of your peak identification you

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12:43:26 2 compared the retention times in IRMS  
12:43:32 3 between the sample and the blank urine,  
12:43:36 4 how did you do that?

12:43:38 5 A. So first of all, identify  
12:44:05 6 the internal standard which you can see  
12:44:07 7 on this at 867.4.

12:44:12 8 Q. Excuse me. So it was  
12:44:14 9 identical on both the blank urine and  
12:44:16 10 the athlete's sample?

12:44:19 11 A. Yes. It's 867.4 in the  
12:44:28 12 blank urine and 867.4 in the sample.

12:44:39 13 Q. Then what did you do to  
12:44:40 14 compare the two?

12:44:43 15 A. So first of all, I put all  
12:44:54 16 the retention times of the molecules  
12:44:57 17 into my log sheet.

12:44:59 18 Q. But before we go to the log  
12:45:02 19 sheet let's go. We've done the  
12:45:08 20 internal standard. Could we do the  
12:45:10 21 same thing with 5-beta, 5-alpha and  
12:45:13 22 PdIol.

12:45:29 23 A. So that's the internal  
12:45:30 24 standard.

12:45:36 25 Q. Can we highlight that one.

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12:45:38 2 Is that the 867?

12:45:38 3 A. Yes. And in the sample it's  
12:45:49 4 867.4.

12:45:50 5 Q. And the 5-beta?

12:46:01 6 A. The blank urine is 1306.2.  
12:46:11 7 And for the sample it's 1304.7.

12:46:17 8 Q. And the 5-alpha?

12:46:19 9 A. It's 1336.6.

12:46:33 10 Q. And for the athlete's  
12:46:40 11 sample?

12:46:40 12 A. And for the athlete's sample  
12:46:44 13 it's 1337.2.

12:46:50 14 Q. And the Pdiol?

12:46:51 15 A. Yes, for the blank urine  
12:47:00 16 1651.5, and for the sample 1652.0.

12:47:09 17 Q. Thank you.

12:47:11 18 MR. YOUNG: Could we bring  
12:47:12 19 up Page 1362, please. It's the one Mr.  
12:47:30 20 Suh was asking about earlier. It's  
12:47:33 21 Exhibit 91, LNDD 1362.

12:47:49 22 Q. First I'd like to identify  
12:47:54 23 that chromatogram. Let's make sure the  
12:47:57 24 witness has that in front of her.

12:48:08 25 A. Yes.

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12:48:09 2 Q. This is not Mr. Landis'  
12:48:19 3 stage 17 sample, is it?

12:48:22 4 A. No.

12:48:34 5 Q. And how do you know that?

12:48:35 6 A. Because it's marked on it  
12:48:49 7 200456F1, and if I go back to Page  
12:49:12 8 1363, LNDD 1363, it's sample 983856,  
12:49:34 9 which was also analyzed on 20th of  
12:49:37 10 April 2007.

12:49:44 11 MR. YOUNG: Can we put up  
12:49:47 12 1362 again, please.

12:50:00 13 Q. And at the top of the page  
12:50:01 14 it says F1. Does that mean it's  
12:50:08 15 fraction 1?

12:50:09 16 A. Yes.

12:50:10 17 Q. And what are the peaks of  
12:50:17 18 interest for purposes of doing IRMS  
12:50:20 19 analysis in fraction 1?

12:50:23 20 A. It would be the 11 ketoetio.

12:50:38 21 Q. And do you care about any of  
12:50:42 22 the other peaks in this chromatogram  
12:50:45 23 for purposes of the IRMS analysis of  
12:50:52 24 delta values?

12:50:54 25 A. No.



1 CYNTHIA MONGONGU - REDIRECT

12:51:03 2 Q. Mr. Rivkin asked you about  
12:51:07 3 the peak, or two peaks that look like  
12:51:13 4 four and five together. Do you  
12:51:17 5 remember that?

12:51:18 6 A. Yes, I remember.

12:51:27 7 Q. Does the fact that you can't  
12:51:30 8 tell the difference between those two  
12:51:33 9 peaks have any bearing on your analysis  
12:51:38 10 of fraction 1 for purposes of  
12:51:42 11 identifying 11 ketoetio?

12:51:48 12 A. No.

12:52:03 13 Q. Let me direct your attention  
12:52:09 14 to Page LNDD 2004 and it's in Exhibit  
12:52:25 15 142. Actually, let's just look at 2005  
12:52:32 16 in Exhibit 142.

12:52:48 17 A. Yes, fine.

12:52:49 18 Q. What is this document?

12:52:55 19 A. It's the log file for the  
12:53:09 20 MSD 22 instrument which is in fact the  
12:53:20 21 instrument we use for the IRMS  
12:53:23 22 analysis.

12:53:37 23 Q. In the IRMS analysis there  
12:53:44 24 are two parts. There's the GC/MS part  
12:53:50 25 and the GC/C/IRMS part, am I correct on

1 CYNTHIA MONGONGU - REDIRECT

12:53:57 2 that?

12:53:57 3 A. Yes.

12:54:12 4 Q. And there are two separate  
12:54:14 5 machines?

12:54:19 6 A. Yes.

12:54:19 7 Q. Used in the IRMS analysis?

12:54:28 8 A. Yes, for the confirmation.

12:54:29 9 Q. And one of the machines is a  
12:54:32 10 GC/MS instrument?

12:54:40 11 A. Yes.

12:54:41 12 Q. And one of the machines is a  
12:54:43 13 GC/C/IRMS instrument?

12:54:53 14 A. Yes.

12:54:53 15 Q. And which of those two  
12:54:55 16 machines are we talking about on this  
12:54:58 17 document?

12:55:08 18 A. The GC/MS machine.

12:55:14 19 Q. And was this the GC/MS  
12:55:17 20 machine that was used in the analysis  
12:55:20 21 of Mr. Landis' Tour de France stage 17  
12:55:26 22 urine?

12:55:27 23 A. Yes.

12:55:43 24 Q. I direct your attention to  
12:55:49 25 the information on this bottom column.

1 CYNTHIA MONGONGU - REDIRECT

12:56:04 2 What does that mean?

12:56:06 3 A. It's a procedure that was  
12:56:14 4 done on the machine.

12:56:16 5 Q. And before that, is this a  
12:56:19 6 record for that particular instrument?

12:56:23 7 A. Yes, it's identified by the  
12:56:36 8 identification number that you see  
12:56:37 9 there, MSD 22.

12:56:43 10 Q. And is this a maintenance  
12:56:46 11 log, or how would you describe this  
12:56:48 12 document?

12:56:49 13 A. It's a log where we keep  
12:57:04 14 track of anything that is done to the  
12:57:06 15 machine in fact. Maintenance that's  
12:57:12 16 done on the machine. Cleaning,  
12:57:19 17 changing the column, the OQPVs as well.

12:57:27 18 Q. Now let me ask the question  
12:57:34 19 what does the entry at the bottom mean?

12:57:41 20 A. Well, this is something that  
12:57:50 21 was done by one of the service people.  
12:58:01 22 So we have the date when the log entry  
12:58:05 23 was made. And this shows there was an  
12:58:08 24 OQPV by Qued Service and that they  
12:58:15 25 changed the column.

1 CYNTHIA MONGONGU - REDIRECT

12:58:19 2 Q. And code 26, what does that  
12:58:22 3 mean?

12:58:31 4 A. It's the code number for the  
12:58:32 5 person who made the log entry.

12:58:41 6 Q. And I notice that the date  
12:58:43 7 of the log entry is the date after the  
12:58:52 8 end of Mr. Le Petit's visit. Why would  
12:58:56 9 that be?

12:58:57 10 A. Because the 27th is when  
12:59:17 11 there was a column change and the  
12:59:20 12 instrument was put back in service.

12:59:22 13 Q. And between the time that  
12:59:25 14 the column is physically changed and  
12:59:29 15 it's put back in service, what has to  
12:59:31 16 happen?

12:59:32 17 A. I don't understand the  
12:59:43 18 question.

12:59:44 19 Q. When you physically put the  
12:59:51 20 column back in the instrument, are  
12:59:55 21 there things that you need to do to the  
12:59:58 22 column before you can actually put it  
13:00:01 23 into service? For example, do you need  
13:00:05 24 to condition it or do other things like  
13:00:08 25 that?

1 CYNTHIA MONGONGU - REDIRECT

13:00:08 2 A. Yes, after we've put a new  
13:00:34 3 column in and before the instrument  
13:00:41 4 could be used for any sport analysis  
13:00:46 5 the column does have to be conditioned.

13:00:51 6 Q. And the date of service  
13:00:56 7 would be the date after the instrument  
13:01:00 8 has been conditioned?

13:01:01 9 A. Yes.

13:01:12 10 MR. YOUNG: I have no  
13:01:13 11 further questions.

13:01:18 12 THE PRESIDENT: Could our  
13:01:28 13 translator please be given the  
13:01:30 14 declaration of Dr. Davis because I want  
13:01:32 15 to ask some questions about some things  
13:01:34 16 that he said. If the translator would  
13:01:55 17 please turn to paragraph 30 on Page 7.  
13:02:04 18 Would you be good enough to read to the  
13:02:06 19 witness paragraphs 30 to 34. Just  
13:03:34 20 pausing there, could you explain the  
13:03:36 21 "I" is a reference to Dr. Davis.

13:03:46 22 THE INTERPRETER: Should I  
13:03:47 23 go on?

13:03:49 24 THE PRESIDENT: Yes, go on  
13:03:50 25 and read 33 and 34, please. Thank you.

1 CYNTHIA MONGONGU

13:04:55 2 And would you ask the witness was it  
13:04:58 3 her decision to do the retesting on  
13:05:01 4 IsoPrime 2?

13:05:06 5 THE WITNESS: The decision  
13:05:18 6 was taken in common also with the  
13:05:22 7 director.

13:05:24 8 THE PRESIDENT: So was it  
13:05:32 9 the director in consult with Ms.  
13:05:34 10 Mongongu, is that what we're saying?

13:05:46 11 THE WITNESS: Yes, we  
13:05:47 12 discussed it, yes.

13:05:50 13 THE PRESIDENT: What was the  
13:06:01 14 reason for the decisions to use the new  
13:06:03 15 machine for the retesting? Or what  
13:06:06 16 were the main reasons if there was more  
13:06:08 17 than one reason?

13:06:14 18 THE WITNESS: Well, the  
13:06:21 19 IsoPrime 2 at that time had been  
13:06:23 20 validated. And the main reason was  
13:06:34 21 that the lawyers for the athlete said  
13:06:37 22 that the IsoPrime 1 was obsolete and  
13:06:40 23 did not give reliable results.

13:06:47 24 THE PRESIDENT: Dr. Davis  
13:06:49 25 when he gave evidence said this. He

1 CYNTHIA MONGONGU

13:07:07 2 said "What they" that is the LNDD  
13:07:10 3 people "seemed to be doing is  
13:07:14 4 reprocessing the system where I would  
13:07:16 5 not be able to see the fact that they  
13:07:19 6 were manually reintegrating the  
13:07:23 7 software."

13:07:55 8 THE WITNESS: During the  
13:07:59 9 retesting?

13:08:01 10 THE PRESIDENT: Yes.

13:08:04 11 THE WITNESS: Mr. Davis,  
13:08:12 12 Dr. Davis was present when we did the  
13:08:14 13 retesting and as far as I remember  
13:08:23 14 during that time he had the right to be  
13:08:26 15 present at any time, any state of the  
13:08:29 16 process.

13:08:30 17 THE PRESIDENT: I'm sorry,  
13:08:31 18 he had the right to what?

13:08:32 19 THE WITNESS: He had the  
13:08:33 20 right to be present during any stage of  
13:08:35 21 the process.

13:08:41 22 THE PRESIDENT: Dr. Davis  
13:08:42 23 suggested in his evidence to this panel  
13:08:44 24 that the decision to use IsoPrime 2 was  
13:08:47 25 to provide better results which would

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13:08:51 2 be more favorable to the lab and less  
13:08:55 3 favorable to the athlete. Do you have  
13:08:58 4 any comment on that suggestion?

13:09:32 5 THE WITNESS: I would only  
13:09:41 6 say that I don't agree. The fact that  
13:09:43 7 we did the testing on the IsoPrime --  
13:09:52 8 the fact that we did the testing on the  
13:09:55 9 IsoPrime 2 was because the IsoPrime 1,  
13:10:06 10 the use of the IsoPrime 1 had been  
13:10:09 11 criticized because of the obsolescence  
13:10:12 12 of the -- obsolescence of the software.

13:10:16 13 And on the IsoPrime 2 the  
13:10:22 14 software, I think that's a name.

13:10:30 15 THE INTERPRETER: I'm asking  
13:10:31 16 the witness to write this name down for  
13:10:34 17 me.

13:10:38 18 A. MassLynx, M-a-s-s-l-y-n-x.  
13:10:51 19 Because they said this ought to give  
13:10:53 20 more precise and more reliable results.  
13:11:00 21 So we did that on the IsoPrime 2. And  
13:11:05 22 it certainly wasn't to push it in the  
13:11:10 23 direction of the lab.

13:11:13 24 THE PRESIDENT: Dr. Davis  
13:11:14 25 said that the decision to use IsoPrime



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13:11:16 2 2 was a piece of misconduct on the part  
13:11:21 3 of the lab and part of the coverup.  
13:11:25 4 Does she have any comment on that  
13:11:27 5 statement?

13:12:02 6 THE WITNESS: I think these  
13:12:09 7 are simply allegations which have no  
13:12:13 8 reason to exist.

13:12:17 9 THE PRESIDENT: Thank you.  
13:12:18 10 Does either counsel wish to ask any  
13:12:20 11 questions arising out of the panel's  
13:12:22 12 questions?

13:12:23 13 MR. SUH: No.

13:12:24 14 MR. YOUNG: We do not.

13:12:27 15 THE PRESIDENT: Thank you  
13:12:28 16 very much for your assistance.

13:12:49 17 Could counsel please  
13:12:50 18 indicate whether Ms. Frelat is ready to  
13:12:55 19 proceed after lunch?

13:12:57 20 MR. BARNETT: Yes.

13:12:58 21 THE PRESIDENT: And Dr.  
13:13:03 22 Buisson would come after that?

13:13:06 23 MR. BARNETT: Correct.

13:13:09 24 MR. SUH: Mr. Chair, I would  
13:13:11 25 take -- I'd like to take the lunch

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13:13:13 2 break -- we've used far more time, in  
13:13:16 3 fact if we could find out what the  
13:13:18 4 remaining time count is that would be  
13:13:20 5 very helpful during the lunch break.  
13:13:23 6 Although we will certainly go forward  
13:13:24 7 with Ms. Frelat, I anticipate that  
13:13:27 8 after I speak with my client that we  
13:13:33 9 are going to be forced to let go some  
13:13:35 10 of the cross examination of some of the  
13:13:37 11 witnesses otherwise we'll never get  
13:13:39 12 done in the allotted time. So if  
13:13:42 13 during the break we could find out what  
13:13:44 14 the time allotment is I can speak with  
13:13:47 15 my client. Again, we'll go forward  
13:13:48 16 with Ms. Frelat certainly and then if I  
13:13:51 17 could get a sense of who would come  
13:13:53 18 after -- I've been told that after  
13:13:58 19 Dr. Buisson if we call her, then it  
13:14:01 20 would be Dr. Brenna. And then who  
13:14:05 21 would come after Dr. Brenna? Assuming  
13:14:07 22 we try to move forward as quickly as we  
13:14:10 23 can.

13:14:10 24 MR. BARNETT: We're still  
13:14:11 25 working off the panel's schedule that

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13:14:13 2 they submitted. So no mystery. After  
13:14:15 3 that would be Dr. Matthews.

13:14:21 4 MR. SUH: That's helpful.

13:14:22 5 MR. RIVKIN: You have a copy  
13:14:24 6 of it.

13:14:24 7 MR. SUH: I do.

13:14:26 8 THE PRESIDENT: We'll be  
13:14:28 9 very happy to have the secretary give  
13:14:30 10 you the timing situation.

13:14:31 11 MR. SUH: I anticipate we  
13:14:33 12 will let go some cross examination.

13:14:37 13 THE PRESIDENT: One hour we  
13:14:39 14 should take today. We'll come back at  
13:14:41 15 2:15.

13:14:43 16 (Lunch recess: 1:15 p.m.)

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1 P R O C E E D I N G S

13:14:43 2 A F T E R N O O N S E S S I O N

14:22:16 3 2:23 p.m.

14:22:16 4 THE PRESIDENT: Good

14:23:46 5 afternoon, everyone. Before we proceed

14:23:49 6 with the next witness we propose to

14:23:51 7 address some of the outstanding motions

14:23:57 8 because it's apparent to us that we've

14:24:01 9 now had time for deliberation and also

14:24:05 10 some of these decisions may be relevant

14:24:07 11 to the question of witnesses who are

14:24:10 12 yet to come up. So what we're going to

14:24:12 13 do is give you our provisional rulings

14:24:16 14 on all of these motions. We say

14:24:20 15 provisional because it's possible we

14:24:22 16 may have misunderstood and it's also

14:24:25 17 possible that counsel may want to have

14:24:29 18 a final word before the decisions are

14:24:32 19 final. So we'll give you on that basis

14:24:35 20 or provisional rulings and if either

14:24:38 21 counsel in relation to any of them

14:24:40 22 wishes to make further submissions

14:24:44 23 we'll deal with that first thing

14:24:46 24 tomorrow morning.

14:24:46 25 I'll include here a few

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14:24:50 2 matters which are not to do with  
14:24:52 3 rulings but administrative matters. In  
14:24:56 4 that regard, I begin by saying that we  
14:24:57 5 would very greatly appreciate receiving  
14:25:00 6 the slides from the Appellant's opening  
14:25:03 7 as soon as convenient because we want  
14:25:05 8 to have those to of course study and go  
14:25:09 9 over again.

14:25:10 10 The second matter that I  
14:25:14 11 want to address is the Appellant's  
14:25:16 12 motion to strike out the untimely  
14:25:19 13 appeal. And we've studied that motion.  
14:25:24 14 We have seen the USADA response of  
14:25:27 15 March 16, and we have also considered  
14:25:29 16 the Jovanovich case which we  
14:25:35 17 distributed the other day. And the  
14:25:37 18 view that we have come to  
14:25:44 19 provisionally, and these are all as  
14:25:46 20 I've said provisional views, is that it  
14:25:48 21 would be beyond our jurisdiction to  
14:25:53 22 strike out this appeal because of the  
14:25:59 23 language in the USADA protocol section.  
14:26:02 24 That language is quoted in paragraph 7  
14:26:04 25 of the USADA response, and in

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14:26:06 2 particular we refer to the concluding  
14:26:09 3 phrase which having set out that  
14:26:13 4 matters to do with penalty may be  
14:26:15 5 raised on appeal says "Otherwise the  
14:26:19 6 regular CAS appellate rules apply."

14:26:22 7 And it seems to us that what  
14:26:24 8 is there happening is that there is a  
14:26:26 9 specific carving out of what might be a  
14:26:29 10 different rule than if you simply look  
14:26:34 11 at the CAS rules alone. It might be  
14:26:38 12 possible to argue from the CAS rules  
14:26:40 13 alone that if a respondent wishes to  
14:26:45 14 challenge a decision on penalty it  
14:26:49 15 should file an actual appeal so that  
14:26:54 16 there can be a reply brief on it. Just  
14:26:57 17 assuming for the moment that that might  
14:26:59 18 be a possible interpretation of the CAS  
14:27:01 19 rules, it's our view that the USADA  
14:27:03 20 protocol section prevents that kind of  
14:27:07 21 argument and makes it absolutely  
14:27:09 22 explicit that the appellate panel has  
14:27:13 23 jurisdiction to deal with matters  
14:27:15 24 regarding penalty.

14:27:22 25 The next matter is the

1 P R O C E E D I N G S

14:27:23 2 Appellant's motion to strike untimely  
14:27:26 3 exhibits and related testimony. And  
14:27:33 4 this may be -- is of the same general  
14:27:36 5 character as USADA's motion to strike  
14:27:38 6 exhibits filed in alleged violation of  
14:27:40 7 CAS Rule 56.

14:27:46 8 The backdrop to both of  
14:27:48 9 these motions of course is CAS article  
14:27:52 10 Rule 57. And it's convenient to read  
14:27:56 11 from the Appellant's brief at Page 12  
14:27:59 12 which says, "CAS Rule 57 provides that  
14:28:02 13 this is a de novo hearing and that CAS  
14:28:06 14 shall review all of the facts and the  
14:28:09 15 law. As such, neither the panel nor  
14:28:11 16 the parties are constrained in any way  
14:28:13 17 by the evidence that was previously  
14:28:15 18 presented. To the contrary, the panel  
14:28:17 19 is entitled to consider new evidence."

14:28:21 20 We accept the Appellant's  
14:28:22 21 statement as a correct analysis of the  
14:28:27 22 position under Rule 57. We do need to  
14:28:31 23 say, however, that even if additional  
14:28:36 24 material is introduced as part of the  
14:28:39 25 de novo appeal hearing there will

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14:28:43 2 always remain the question of the  
14:28:45 3 weight to be given to the evidence.

14:28:47 4 Coming back to the  
14:28:52 5 Appellant's motion to strike, we have  
14:28:54 6 carefully read the motion, we have  
14:28:58 7 noted the further comments that were  
14:29:02 8 made in the letter of March 20th, and  
14:29:05 9 we've seen the response of USADA. It's  
14:29:14 10 our view that the USADA material should  
14:29:25 11 be allowed to be introduced. It is  
14:29:31 12 noted that there are strong submissions  
14:29:35 13 from the Appellant that it's  
14:29:37 14 inappropriate, notwithstanding the de  
14:29:41 15 novo rule, to allow the introduction of  
14:29:43 16 evidence which either directly or  
14:29:46 17 obliquely was subject to rulings on  
14:29:49 18 disclosure in the proceedings below.  
14:29:54 19 Even though we don't uphold this motion  
14:29:59 20 and we allow in these exhibits and any  
14:30:03 21 related testimony, we want to make it  
14:30:05 22 clear that if, for example, it's  
14:30:09 23 suggested that we should give less  
14:30:13 24 weight to any of this new material  
14:30:15 25 because of the fact that it may have



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14:30:17 2 been able to be produced below or  
14:30:19 3 should have been produced below, then  
14:30:21 4 we of course will take that into  
14:30:23 5 account. But we do not feel that any  
14:30:29 6 basis exists for rejecting the material  
14:30:35 7 in view of the fact that this is a de  
14:30:42 8 novo hearing.

14:30:43 9 When we come to the USADA  
14:30:45 10 motion to strike Exhibit 5 in violation  
14:30:50 11 of CAS Rule 56, our approach is  
14:30:58 12 similar. It may be that this material  
14:30:59 13 should have been produced earlier. We  
14:31:03 14 note that there's a suggestion that the  
14:31:07 15 Appellant may have been led off the  
14:31:11 16 trail by the wording in our procedural  
14:31:13 17 rules. Be that as it may be, our view  
14:31:18 18 is that just as with the Appellant's  
14:31:22 19 motion to strike, this motion to strike  
14:31:25 20 by USADA should not be upheld.

14:31:32 21 A few final observations.  
14:31:35 22 If those rulings and the permission to  
14:31:39 23 each party to introduce new material  
14:31:42 24 requires in any special case the recall  
14:31:48 25 of a witness or any other response then

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14:31:52 2 we will be willing to consider whether  
14:31:54 3 such would be allowed. We by giving  
14:32:01 4 this ruling now allow the parties to  
14:32:04 5 reflect on the consequences with regard  
14:32:06 6 to witnesses who have been heard or  
14:32:08 7 witnesses yet to come, and if they have  
14:32:11 8 any issues of that kind to raise, then  
14:32:13 9 we'd be grateful if they would raise  
14:32:16 10 them tomorrow and as early as possible,  
14:32:21 11 but no later than tomorrow.

14:32:22 12 The next matter on the list is  
14:32:26 13 the evidence of Dr. Meier-Augenstein.  
14:32:31 14 The first thing we should say is that we  
14:32:33 15 have received and considered the medical  
14:32:35 16 report and we assume that Mr. Young has  
14:32:41 17 also seen it. Is that right, Mr. Young?

14:32:44 18 MR. YOUNG: I have not seen  
14:32:45 19 it.

14:32:47 20 MR. SUH: We understood the  
14:32:49 21 panel's order that the panel would show  
14:32:51 22 a copy to Mr. Young.

14:32:53 23 THE PRESIDENT: I see.

14:32:55 24 MR. PAULSSON: I see.

14:32:56 25 THE PRESIDENT: Well, we will

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14:32:57 2 do that. If we have misread the  
14:33:02 3 situation, we apologize. But I think,  
14:33:05 4 and this may help Mr. Young, the view we  
14:33:08 5 take on this matter is that based on the  
14:33:16 6 medical certificate it's permissible for  
14:33:20 7 us to receive the witness brief from Dr.  
14:33:33 8 Meier-Augenstein. As the respondent has  
14:33:39 9 pointed out, this particular witness gave  
14:33:44 10 evidence below, therefore, it seems to us  
14:33:49 11 that there is no unfairness in receiving  
14:33:52 12 his present brief because, as has been  
14:33:56 13 pointed out in the USADA response, to the  
14:34:03 14 extent that we need to assign weight to  
14:34:07 15 the testimony, it's permissible for us to  
14:34:11 16 go and look at the transcript below and  
14:34:14 17 if necessary to play the video to see  
14:34:17 18 what was the demeanor of the witness.

14:34:19 19 So I suppose that ruling is  
14:34:24 20 doubly provisional in the sense that  
14:34:26 21 you haven't seen the medical report.

14:34:29 22 MR. YOUNG: I understand  
14:34:30 23 that there may be confidential  
14:34:31 24 information in the medical report. I  
14:34:34 25 don't need to see it. If the panel is

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14:34:36 2 satisfied, I'm satisfied.

14:34:38 3 THE PRESIDENT: Thank you  
14:34:39 4 very much.

14:34:39 5 So what we would propose to  
14:34:42 6 do, Mr. Suh, is to return to you these  
14:34:45 7 medical certificates.

14:35:13 8 Finally, we would say that  
14:35:16 9 we believe we've covered all the  
14:35:18 10 outstanding motions and other  
14:35:21 11 administrative matters. If either  
14:35:25 12 counsel have any other matters related  
14:35:28 13 to those or new matters that require a  
14:35:35 14 determination, we would require them to  
14:35:36 15 be notified no later than when we  
14:35:43 16 commence in the morning because if we  
14:35:45 17 have overlooked anything we want to  
14:35:48 18 deal with those things as soon as  
14:35:50 19 possible.

14:35:50 20 If we have no notification  
14:35:53 21 by the time we start tomorrow we will  
14:35:55 22 assume that we have dealt with all  
14:35:57 23 outstanding matters.

14:35:58 24 Thank you.

14:36:02 25 I should have said that in

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14:36:16 2 relation to the Appellant's motion to  
14:36:19 3 strike untimely exhibits and related  
14:36:22 4 testimony it will be recalled that the  
14:36:25 5 document itself is called respondent's  
14:36:28 6 motion. So to avoid confusion, when I  
14:36:31 7 speak about the Appellant's motion, I'm  
14:36:33 8 speaking about the one that actually  
14:36:34 9 has the heading "Respondent's motion,"  
14:36:38 10 but I think everybody knows what I'm  
14:36:40 11 talking about.

14:36:41 12 Unless either counsel has  
14:36:44 13 any immediate comments, we have  
14:36:49 14 reserved leave to make further comments  
14:36:53 15 tomorrow, unless there is anything that  
14:36:54 16 needs urgent comment, we will proceed  
14:36:57 17 with the next witness.

14:36:58 18 MR. SUH: One more  
14:36:59 19 administrative matter. Just one more  
14:37:14 20 administrative matter with respect to  
14:37:16 21 witnesses. We looked over the witness  
14:37:18 22 schedule and our remaining time  
14:37:21 23 allocation and we have decided to do  
14:37:23 24 the following. That we will not cross  
14:37:27 25 examine the following persons. They're

1 P R O C E E D I N G S

14:37:32 2 related primarily to chain of custody,  
14:37:35 3 but they're Ester Cerpolini, Franck  
14:37:39 4 Neveu, Marjorie Cariou. The first one  
14:37:58 5 is Ester Cerpolini. The second one is  
14:38:00 6 Mr. Franck Neveu, Marjorie Cariou. And  
14:38:18 7 we would very briefly cross examine Ms.  
14:38:25 8 Garcia, Myriam Garcia. But in order to  
14:38:36 9 save time, we'd be happy to do that  
14:38:38 10 telephonically, so we won't have to  
14:38:43 11 have the transaction time of going back  
14:38:45 12 and forth to the other conference room  
14:38:47 13 for what I believe will be a brief  
14:38:51 14 examination.

14:38:52 15 THE PRESIDENT: Thank you  
14:38:53 16 very much.

14:38:59 17 MR. YOUNG: Does that mean  
14:39:00 18 the testimony of Ester Cerpolini, Neveu  
14:39:04 19 and Marjorie Cariou is accepted without  
14:39:09 20 our needing to call them and go through  
14:39:11 21 the formality of having them accept  
14:39:13 22 their statements?

14:39:13 23 THE PRESIDENT: Yes, that is  
14:39:14 24 the position.

14:39:16 25 MR. YOUNG: Thank you.

1 P R O C E E D I N G S

14:39:18 2 MR. RIVKIN: Can I just ask  
14:39:19 3 about Ms. Gaillard, is she going to be  
14:39:22 4 here or by phone?

14:39:31 5 MR. YOUNG: Yes.

14:39:31 6 MR. SUH: We'd like to wait  
14:39:32 7 to update you and see how time goes,  
14:39:35 8 especially this afternoon. It may be  
14:39:37 9 possible that we also don't call  
14:39:40 10 Dr. Buisson. Again, it depends how  
14:39:42 11 long it takes to get through Ms.  
14:39:44 12 Frelat. We did not anticipate this  
14:39:46 13 being quite so lengthy and we're keenly  
14:39:48 14 aware that if we spend too much time  
14:39:53 15 the odds of getting through Dr. Brenna  
14:39:55 16 or completing him will be very, very  
14:39:57 17 slim by the end of the day, which  
14:39:59 18 basically leaves us a day and a third,  
14:40:01 19 something to that effect, for the  
14:40:03 20 balance of the actual receipt of  
14:40:04 21 testimony, which would be close to  
14:40:08 22 where we're at.

14:40:12 23 MR. BARNETT: Can I just  
14:40:13 24 take this opportunity to address one  
14:40:15 25 other scheduling matter. Sean Petty

1 P R O C E E D I N G S

14:40:17 2 had originally been listed for Monday.  
14:40:20 3 For travel reasons it would be helpful  
14:40:22 4 if he could go at 2 p.m. our time on  
14:40:26 5 Saturday instead to the extent you'd  
14:40:30 6 still like to cross examine him.

14:40:33 7 MR. SUH: That's fine.

14:40:35 8 MR. RIVKIN: He's by phone,  
14:40:37 9 right?

14:40:38 10 MR. BARNETT: Yes. And we  
14:40:45 11 are having some scheduling issues with  
14:40:47 12 Ms. Gaillard, so any indication, an  
14:40:49 13 update on her would be helpful as soon  
14:40:51 14 as you have it.

14:40:52 15 MR. SUH: I think we would  
14:40:53 16 most likely know about that by the  
14:40:58 17 mid-afternoon today. I especially  
14:41:00 18 would like to see how long it takes us  
14:41:02 19 to get through Ms. Frelat.

14:41:20 20 MR. RIVKIN: Since we have  
14:41:21 21 Mr. Leguy on Monday, he's available  
14:41:24 22 Monday morning at 8, we thought maybe  
14:41:26 23 we should just start Monday morning at  
14:41:28 24 8 o'clock so we can get him done first  
14:41:32 25 and then proceed with witnesses from



1 P R O C E E D I N G S

14:41:35 2 there.

14:41:36 3 MR. SUH: That would be

14:41:37 4 fine.

14:41:38 5 MR. YOUNG: Mr. Rivkin, you

14:41:39 6 had asked whether he'd be in a hotel,

14:41:41 7 and he's staying with his in-laws in

14:41:44 8 Limoges.

14:41:45 9 MR. RIVKIN: Could you ask

14:41:46 10 him to find some place in town where

14:41:48 11 materials could be faxed so that

14:41:52 12 Appellant will have an opportunity to

14:41:54 13 get some documents to him to make the

14:41:55 14 examination --

14:41:57 15 MR. YOUNG: Certainly if you

14:41:58 16 want I will do that and if there are

14:42:05 17 some documents that anyone wants him to

14:42:07 18 have sooner we can -- we can try, but

14:42:11 19 I'll see if I can get the word to him

14:42:14 20 to figure out a fax machine in Limoges.

14:42:18 21 MR. PAULSSON: The indication

14:42:19 22 you gave was somewhat cryptic. I assume

14:42:25 23 that would suggest he would be very

14:42:25 24 willing to go to a hotel.

14:42:29 25 MR. BARNETT: On the same

1 P R O C E E D I N G S

14:42:30 2 issue of documents, that's the one  
14:42:32 3 other thing we had discussed was -- if  
14:42:41 4 Appellant would let us know if there  
14:42:42 5 are documents you would like to get to  
14:42:44 6 at this point Ms. Garcia and Ms.  
14:42:46 7 Gaillard, the two telephone witnesses,  
14:42:49 8 because they would not be going back in  
14:42:50 9 the laboratory, so we would try to  
14:42:53 10 email or fax those documents to them.

14:42:55 11 MR. SUH: I think with  
14:42:56 12 respect to Ms. Garcia the documents  
14:43:09 13 referenced in her declaration would be  
14:43:13 14 sufficient and again, we'll let you  
14:43:15 15 know about Ms. Gaillard. Frankly,  
14:43:17 16 we'll also try to update the panel on  
14:43:19 17 the status of other witnesses as we go  
14:43:21 18 through. I mean we're mindful of the  
14:43:24 19 time. We may very well have to make  
14:43:26 20 further adjustments.

14:43:28 21 THE PRESIDENT: We fully  
14:43:28 22 understand and we're most grateful for  
14:43:31 23 your indication as you go forward. We  
14:43:34 24 will fit in with whatever the parties  
14:43:36 25 want.

1 P R O C E E D I N G S

14:43:37 2 Can I just say one other  
 14:43:38 3 thing about witnesses who are giving  
 14:43:40 4 evidence by telephone. I think it  
 14:43:42 5 would be incumbent on respondent to  
 14:43:44 6 make sure that they have the documents  
 14:43:47 7 that are mentioned in their briefs. If  
 14:43:50 8 they don't you should immediately send  
 14:43:52 9 those because, quite apart from any  
 14:43:54 10 other documents, they obviously need to  
 14:43:56 11 have the documents to which they're  
 14:43:58 12 referring in their briefs.

14:44:00 13 MR. YOUNG: Sure.

14:44:24 14 THE PRESIDENT: Will Ms.  
 14:44:25 15 Frelat come forward, please.

14:44:41 16 MR. PAULSSON: I think you  
 14:44:46 17 were present during the examination of  
 14:44:48 18 other witnesses in this matter.

14:44:51 19 MS. FRELAT: Yes.

14:44:53 20 MR. PAULSSON: So you've  
 14:44:59 21 been able to see how that works with  
 14:45:00 22 questions from the lawyers and possibly  
 14:45:02 23 also questions from the members of the  
 14:45:04 24 panel?

14:45:05 25 MS. FRELAT: Yes.

1 CLAUDE FRELAT - DIRECT

14:45:16 2 MR. PAULSSON: It remains to  
14:45:28 3 me to ask if you will say that the  
14:45:30 4 evidence you give to this panel will be  
14:45:31 5 insincere and truthful under penalty of  
14:45:35 6 perjury.

14:45:38 7 MS. FRELAT: Yes.

14:45:38 8 D I A N A C L A R K,  
14:45:38 9 called as the interpreter in this  
14:45:38 10 action, resumed, having been previously  
14:45:40 11 sworn.

12 C L A I R E F R E L A T,  
13 called as a witness on behalf of the  
14 Respondent, having been first duly  
15 affirmed by the Arbitrator (Jan  
16 Paulsson) was examined and testified  
17 through the interpreter as follows:

18 DIRECT EXAMINATION

14:45:43 19 BY MR. YOUNG:

14:45:43 20 Q. Ms. Frelat, you've submitted  
14:45:44 21 a declaration in this case?

14:45:53 22 A. Yes.

14:45:53 23 Q. And a supplemental  
14:45:54 24 declaration?

14:45:56 25 A. Yes.

1 CLAUDE FRELAT - DIRECT

14:45:56 2 Q. And do you accept those as  
14:45:59 3 your testimony in this case?

14:46:01 4 A. Yes.

14:46:06 5 MR. YOUNG: Thank you.

14:46:09 6 CROSS EXAMINATION

14:46:10 7 BY MR. SUH:

14:46:10 8 Q. Good afternoon. I'd like to  
14:46:14 9 turn your attention to LNDD 2004. Do  
14:46:33 10 you recognize what LNDD 2004 is?

14:46:37 11 A. Yes, it's the log sheet of  
14:46:48 12 actions taken on machine number MSD 22.

14:46:53 13 Q. And if we could go column by  
14:46:57 14 column, the farthest column on the  
14:47:01 15 left-hand side there is the word date.  
14:47:13 16 And what does that date -- what is that  
14:47:16 17 date associated with?

14:47:38 18 A. It shows the date when  
14:47:39 19 something was done to the machine.

14:47:44 20 Q. And the next column, what  
14:47:46 21 does that information in that column --  
14:47:51 22 what is the information in that column?

14:48:05 23 A. Where it's headed nature?

14:48:08 24 Q. Yes.

14:48:10 25 A. It's a description of what

1 CLAUDE FRELAT - DIRECT

14:48:21 2 was observed on the machine.

14:48:26 3 Q. Would that be a description

14:48:29 4 -- of what was observed on the machine?

14:48:31 5 What do you mean by what was observed

14:48:33 6 on the machine?

14:49:07 7 A. There would be problems and

14:49:09 8 comments, for example, in the first box

14:49:16 9 right underneath the word nature the

14:49:20 10 word prevention appears. So sometimes

14:49:29 11 we do something to the machine as a

14:49:32 12 means of prevention.

14:49:36 13 Q. And the next column says

14:49:38 14 code; is that right?

14:49:40 15 A. Yes.

14:49:40 16 Q. And what does that code

14:49:43 17 represent?

14:49:43 18 A. That is the operator code.

14:49:54 19 Q. The operator code of the

14:49:57 20 operator who discovered the problem or

14:49:59 21 noted the problem?

14:50:00 22 A. Yes, it isn't always a

14:50:12 23 problem, but it is the code of the

14:50:14 24 person who did the observation.

14:50:17 25 Q. And going to the next column

1 CLAUDE FRELAT - DIRECT

14:50:19 2 there's a type there and does that type  
14:50:22 3 correspond to the types of  
14:50:25 4 interventions which are set forth at  
14:50:28 5 the bottom there of the form, ML, CM,  
14:50:33 6 PS?

14:50:44 7 A. Yes.

14:50:44 8 Q. The next code is the code of  
14:50:46 9 the operator again, correct?

14:50:52 10 A. Yes.

14:50:52 11 Q. The next date is the date of  
14:50:55 12 the operation or intervention that was  
14:51:02 13 taken or the fix that was put in place  
14:51:04 14 to address the issue that's raised on  
14:51:07 15 the left-hand side; is that correct?

14:51:16 16 A. Yes.

14:51:20 17 Q. And the far right column  
14:51:23 18 there is a number, numbers 8, 9, 10  
14:51:28 19 going down. What do those represent?

14:51:39 20 A. It's a service number that's  
14:51:49 21 assigned in the lab to indicate which  
14:51:58 22 refers to its returning to service.

14:52:03 23 Q. Is this form filled out  
14:52:07 24 contemporaneously?

14:52:09 25 A. When the instrument is put

1 CLAUDE FRELAT - DIRECT

14:52:21 2 back into service, yes, the form is  
14:52:25 3 marked.

14:52:26 4 Q. In other words, whatever is  
14:52:28 5 shown in the column which is third from  
14:52:32 6 the right, whatever is shown in that  
14:52:37 7 column is always done contemporaneously,  
14:52:41 8 it's always filled out contemporaneously  
14:52:44 9 with what is listed there, correct?

14:53:05 10 A. Yes.

14:53:05 11 Q. And it's always filled out  
14:53:08 12 in order? In other words, entry number  
14:53:10 13 8 would have been done before entry  
14:53:19 14 number 9 and entry number 9 would have  
14:53:21 15 been done before entry number 10,  
14:53:35 16 correct?

14:53:37 17 A. Yes.

14:53:37 18 Q. I'd like to now turn your  
14:53:40 19 attention to LNDD 2005. LNDD 2005 is  
14:54:01 20 what appears to be the preceding page  
14:54:06 21 because you can see the numbers 5, 6, 7  
14:54:09 22 on the far right column which precede  
14:54:12 23 8, 9, 10 on the page we just looked at.

14:54:42 24 A. It does appear to be the  
14:54:44 25 previous page.



1 CLAUDE FRELAT - DIRECT

14:54:44 2 Q. And you were the operator 26  
14:54:46 3 who is listed in the code section which  
14:54:49 4 is the fifth from the right-hand side,  
14:54:53 5 correct?

14:55:02 6 A. Yes.

14:55:02 7 Q. So you would have filled out  
14:55:04 8 all three of those rows from the code  
14:55:06 9 26 to the right?

14:55:16 10 A. Yes.

14:55:16 11 Q. And you would have filled  
14:55:18 12 out the information to the left of the  
14:55:19 13 highlighted 26s, correct?

14:55:22 14 A. Yes.

14:55:28 15 Q. I'd like to turn your  
14:55:30 16 attention -- by the way, when was this  
14:55:32 17 document created?

14:55:46 18 A. What do you mean by the date  
14:55:48 19 of creation?

14:55:49 20 Q. When was the information put  
14:55:50 21 on this form?

14:56:00 22 A. January 2006.

14:56:03 23 Q. I'd like to turn your  
14:56:06 24 attention to the top column, excuse me,  
14:56:10 25 the top row and there's a date right

1 CLAUDE FRELAT - DIRECT

14:56:12 2 after the highlighted 26. Do you see  
14:56:14 3 how it reads January 30th of 2006?

14:56:18 4 A. Yes, I see it.

14:56:28 5 Q. And then go down to the row  
14:56:31 6 immediately below it. Do you see the  
14:56:37 7 date there reads January 20th, 2006?

14:56:41 8 A. Yes, yes, I see it.

14:56:43 9 Q. So that second -- and that  
14:56:47 10 third row right below that is the row  
14:56:55 11 containing the information relating to  
14:56:57 12 the change of column which is at issue  
14:57:00 13 in this case, you understand that?

14:57:17 14 A. Yes.

14:57:17 15 Q. So this form wasn't filled  
14:57:22 16 out contemporaneously, correct, because  
14:57:26 17 you couldn't have filled out the second  
14:57:28 18 row information after the first row's  
14:57:33 19 information, because it was 10 days  
14:57:34 20 before the information in the first  
14:57:36 21 row, correct?

14:57:51 22 A. Apparently, yes.

14:58:04 23 Q. All right. So it is still  
14:58:11 24 your testimony that this form was  
14:58:13 25 filled out in January of 2006; is that

1 CLAUDE FRELAT - DIRECT

14:58:17 2 right?

14:58:17 3 A. That's what it says on this  
14:58:31 4 sheet.

14:58:32 5 Q. That's not my question. My  
14:58:33 6 question is it is still your testimony,  
14:58:38 7 not about what it says, but that it is  
14:58:41 8 in fact a form that you filled out in  
14:58:44 9 January of 2006?

14:58:46 10 A. I would prefer to say that  
14:59:17 11 we see what is on the form. I don't  
14:59:21 12 remember. I just can see what's  
14:59:23 13 written here.

14:59:26 14 Q. Are you the LNDD technician  
14:59:32 15 that changed the column in January of  
14:59:36 16 2006? Excuse me, I meant April 2006.

15:00:05 17 MR. RIVKIN: Why don't you  
15:00:07 18 start the question again so it's clear.

15:00:09 19 MR. SUH: Sure.

15:00:10 20 Q. Are you the technician, the  
15:00:11 21 LNDD technician who changed the column  
15:00:14 22 in April of 2006?

15:00:18 23 A. It's written down here that  
15:00:31 24 it was me.

15:00:32 25 Q. I'm not asking what is

1 CLAUDE FRELAT - DIRECT

15:00:33 2 written down here. I'm asking you  
15:00:36 3 whether or not you remember being the  
15:00:39 4 one who changed the column in April of  
15:00:43 5 2006.

15:01:00 6 A. I don't remember.

15:01:03 7 Q. How many different kinds of  
15:01:09 8 columns does LNDD use?

15:01:12 9 A. Do you mean the whole of  
15:01:22 10 LNDD?

15:01:23 11 Q. Yes.

15:01:25 12 A. I don't know.

15:01:27 13 Q. And is the fact that you  
15:01:31 14 don't remember changing the column the  
15:01:37 15 reason why you didn't put anything  
15:01:39 16 about columns in either of your  
15:01:42 17 declarations?

15:01:43 18 A. May I look at my statement?

15:02:12 19 Q. Yes, of course.

15:02:46 20 THE INTERPRETER: The witness  
15:02:47 21 has asked me to repeat the question.

15:03:26 22 A. I really don't know why I  
15:03:28 23 didn't mention the column in my  
15:03:30 24 statements.

15:03:46 25 May I make something clear,

1 CLAUDE FRELAT - DIRECT

15:03:53 2 please?

15:03:54 3 Q. Yes, of course.

15:03:56 4 A. The number 7 return to  
15:04:03 5 service was done after the intervention  
15:04:14 6 -- was done -- was put in after the  
15:04:20 7 Qued Service visit. And I did the  
15:04:25 8 tests so that it could be returned into  
15:04:27 9 service. And that's why it's number 7  
15:04:40 10 with my operator code.

15:04:46 11 Q. I'd like to turn your  
15:04:47 12 attention now to LNDD 1748 which is  
15:04:58 13 Exhibit 110. All right, just a few  
15:05:46 14 simple questions I'm sure you'll find  
15:05:50 15 easy to answer. Do you recognize LNDD  
15:05:53 16 1748 to be a stable isotope CF analysis  
15:05:59 17 results page from LNDD?

15:06:05 18 A. It's an LNDD page.

15:06:26 19 Q. And what date was the date  
15:06:30 20 in which this test was conducted?

15:06:32 21 A. 10th of October 2005.

15:06:44 22 Q. And which instrument was it  
15:06:47 23 conducted on?

15:06:49 24 A. IsoPrime 2.

15:06:56 25 Q. And if you could turn your

1 CLAUDE FRELAT - DIRECT

15:06:58 2 attention to LNDD 1749, 1750, 1751 --  
15:07:14 3 actually, you know what, why do we just  
15:07:16 4 -- why don't you take a moment to  
15:07:17 5 review the following pages and I'm  
15:07:20 6 going to read them off. It will  
15:07:23 7 probably be easiest if you review them  
15:07:25 8 right on your -- right in your hard  
15:07:30 9 copies because you can flip through  
15:07:31 10 them. They're LNDD 1749, 1750, all the  
15:07:38 11 way through 1755. So basically 1748  
15:07:45 12 through 1755.

15:07:52 13 THE INTERPRETER: 1748?

15:07:55 14 MR. SUH: 1748 through 1755.

15:07:59 15 THE INTERPRETER: I thought  
15:08:00 16 you said 1749.

15:08:12 17 Q. Do you see those?

15:08:13 18 A. Yes.

15:08:13 19 Q. Do you recognize that these  
15:08:15 20 chromatograms are related to the  
15:08:17 21 finding of an adverse analytic finding  
15:08:20 22 on the IsoPrime 2 instrument in October  
15:08:25 23 10th, 2005?

15:08:58 24 A. In fact, I cannot answer you  
15:09:00 25 because in October 2005 I hadn't got

1 CLAUDE FRELAT - DIRECT

15:09:03 2 there yet in IRMS. I was in the lab  
15:09:07 3 but in a different department.

15:09:11 4 Q. Right. But do you recognize  
15:09:13 5 that these are from the IsoPrime 2  
15:09:17 6 instrument?

15:09:19 7 A. Yes, they are about the  
15:09:30 8 IsoPrime 2.

15:09:30 9 Q. And again, I'm not asking if  
15:09:32 10 you did it, but do you recognize that  
15:09:34 11 this -- these pages establish an  
15:09:37 12 adverse analytic finding?

15:09:40 13 A. I only have the  
15:10:14 14 chromatographs. I don't have the logs  
15:10:16 15 that would -- the FSR 06 and the  
15:10:25 16 analytical report --

15:10:29 17 THE INTERPRETER: I'm sorry,  
15:10:29 18 I made a mistake.

15:10:31 19 A. It's EFCR 06 and the  
15:10:34 20 analysis reports. I don't know if this  
15:10:48 21 was used to do an adverse report.

15:10:54 22 Q. I'd like to turn your  
15:10:55 23 attention now to LNDD 1797. Do you  
15:11:16 24 recognize that this is a stable isotope  
15:11:19 25 analysis results page for the IsoPrime

1 CLAUDE FRELAT - DIRECT

15:11:23 2 2 instrument also?

15:11:36 3 A. Yes, it's for the IsoPrime

15:11:39 4 2, yes.

15:11:39 5 Q. And what was the date that

15:11:42 6 this test was conducted?

15:11:44 7 A. 28th of April 2006.

15:11:54 8 Q. When was the date on which

15:11:59 9 Mr. Landis' samples were tested?

15:12:03 10 A. The B samples were done on

15:12:17 11 August 4.

15:12:20 12 Q. Of?

15:12:21 13 A. Of 2006.

15:12:24 14 Q. So both of these tests were

15:12:26 15 conducted on the IsoPrime 2 prior to

15:12:31 16 the testing of Mr. Landis' sample,

15:12:34 17 correct?

15:12:46 18 A. Yes.

15:12:47 19 Q. Are you aware that Ms.

15:12:53 20 Mongongu explained to the panel that

15:12:55 21 the IsoPrime 2 had not been validated

15:13:01 22 at the time of the testing of Mr.

15:13:04 23 Landis' sample and that only the

15:13:07 24 IsoPrime 1 had been validated?

15:13:11 25 A. I don't know what she said



1 CLAUDE FRELAT - DIRECT

15:13:37 2 during her testimony. I don't know

15:13:47 3 what she said in her testimony, but it

15:13:50 4 is quite true that the IsoPrime 2 was

15:13:54 5 not validated until after that date.

15:13:56 6 Q. So --

15:13:58 7 MR. RIVKIN: Just so we're

15:13:59 8 clear, until after what date?

15:14:05 9 THE WITNESS: The dates when

15:14:06 10 the analysis for Mr. Landis were done.

15:14:10 11 Q. But still yet you were using

15:14:12 12 the IsoPrime 2 to conduct IRMS testing

15:14:18 13 on athlete's samples before July of

15:14:23 14 2006, correct?

15:14:25 15 A. Whenever the IsoPrime 1 was

15:14:49 16 undergoing maintenance it would happen

15:14:52 17 that we would use the IsoPrime 2, yes.

15:15:00 18 But when that was the case the analysis

15:15:04 19 reports were brought out under the name

15:15:07 20 COFRAC.

15:15:10 21 MR. PAULSSON: They were

15:15:11 22 not.

15:15:11 23 THE INTERPRETER: I'm so

15:15:13 24 sorry, please forgive me.

15:15:14 25 A. They were brought out

1 CLAIR FRELAT - DIRECT

15:15:15 2 without the name COFRAC.

15:15:19 3 MR. SUH: For the record, I  
15:15:20 4 just should inform the panel because we  
15:15:22 5 were given these in response to a  
15:15:24 6 discovery request, the documents we  
15:15:26 7 showed the witness were the positive  
15:15:29 8 results from other athletes that we had  
15:15:32 9 asked for so we received other positive  
15:15:35 10 IRMS test results. We don't have the  
15:15:38 11 conclusion page. We were never  
15:15:40 12 provided with it. But this is what we  
15:15:41 13 were told that LNDD had historically  
15:15:45 14 provided and reported as positive  
15:15:47 15 results.

15:15:50 16 MR. PAULSSON: In other  
15:15:51 17 words, Mr. Suh --

15:15:55 18 MR. SUH: Yes.

15:15:56 19 MR. PAULSSON: That makes --  
15:16:00 20 you therefore cannot react to the  
15:16:02 21 witness's last answer?

15:16:04 22 MR. SUH: I actually can. I  
15:16:06 23 just wanted to give the panel -- if I  
15:16:08 24 could go ahead and show the panel LNDD  
15:16:11 25 1726 which is a cover page to an email.

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15:16:54 2 Q. I'd like to turn your  
15:16:55 3 attention -- Ms. Frelat, I'd like to  
15:17:00 4 turn your attention now to Page 2 of  
15:17:02 5 your declaration where it says "IRMS  
15:17:14 6 peak identification."

15:17:28 7 A. Yes.

15:17:28 8 Q. Do you see where it says under  
15:17:41 9 peak identification, "Pre-identification  
15:17:44 10 is done visually based on the similar  
15:17:46 11 chromatographic profiles obtained in IRMS  
15:17:49 12 and GC/MS"? Do you see that?

15:17:53 13 A. Yes, we can see the French  
15:17:55 14 sentence in her declaration.

15:17:59 15 Q. So that is step 1 of your  
15:18:04 16 peak identification process, correct?

15:18:07 17 A. Yes.

15:18:17 18 Q. And explain to me how you  
15:18:22 19 were trained on the process of matching  
15:18:33 20 the profiles obtained in IRMS and  
15:18:35 21 GC/MS?

15:18:36 22 A. We look at the chromatographic  
15:19:05 23 profiles.

15:19:07 24 THE INTERPRETER: May I  
15:19:08 25 repeat the question. The question was

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15:19:09 2 about training.

15:19:40 3 A. The year of my training I  
15:19:43 4 prepared blank urine which I did under  
15:19:48 5 GC/MS where I did peak identification,  
15:20:04 6 so I did that and looking at it in Mix  
15:20:09 7 Acetate with the retention times,  
15:20:10 8 relative retention times.

15:20:16 9 MR. PAULSSON: Relative  
15:20:17 10 abundance.

15:20:19 11 THE INTERPRETER: Relative  
15:20:20 12 abundance.

15:20:22 13 A. And once I'd identify my  
15:20:27 14 blank urine through GC/MS then I put it  
15:20:33 15 through IRMS so that I could prepare  
15:20:42 16 the chromatograph profiles that I  
15:20:45 17 obtained.

15:20:45 18 Q. Let me go back to this  
15:20:47 19 pre-identification step. The  
15:20:50 20 pre-identification step is a visual  
15:20:52 21 comparison of the GC/MS and IRMS  
15:20:55 22 chromatograms, correct?

15:21:10 23 A. Yes, that is the  
15:21:15 24 pre-identification.

15:21:16 25 Q. Just so that I'm clear about

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15:21:22 2 this, this is your step 1 of your peak  
15:21:26 3 identification process, correct, right?

15:21:41 4 A. To identify IRMS peaks, yes.

15:21:48 5 Q. And this is the method you  
15:21:50 6 use all the time, correct?

15:22:00 7 A. Yes.

15:22:01 8 Q. And so when you say you use  
15:22:07 9 it all the time, just to be clear, you  
15:22:10 10 don't use it just some of the time and  
15:22:12 11 not other times, you use it all the  
15:22:15 12 time for all IRMS tests?

15:22:18 13 A. For all the IRMS tests that  
15:22:36 14 we do there is an identification by  
15:22:43 15 GC/MS before the GC/MS analysis --

15:22:43 16 THE INTERPRETER: I beg your  
15:22:43 17 pardon.

15:22:49 18 A. Before the IRMS analysis.  
15:23:05 19 And once we've got the chromatographic  
15:23:08 20 profile in GC/MS we inject on IRMS.  
15:23:23 21 And that's how we get a GC/MS and an  
15:23:26 22 IRMS profile so that we can proceed to  
15:23:29 23 the comparison of profiles and  
15:23:31 24 identification.

15:23:32 25 Q. Let me turn your attention

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15:23:33 2 now --

15:23:35 3 MR. SUH: Todd, could you

15:23:37 4 put up on the screen the same two

15:23:41 5 chromatograms GC/MS and GC/C/IRMS that

15:23:47 6 we showed Ms. Mongongu.

15:23:50 7 Q. And while that's coming up,

15:23:55 8 it will take probably a minute to pull

15:23:57 9 those up, Ms. Frelat, let me ask you a

15:24:00 10 question. There's no SOP on this first

15:24:02 11 step, is there, this peak pattern

15:24:07 12 matching step?

15:24:09 13 A. No, there is no SOP. No

15:24:14 14 operation manual.

15:24:22 15 MR. RIVKIN: Is there any

15:24:23 16 operating manual for manual

15:24:25 17 integration?

15:24:29 18 THE WITNESS: Of the MDP 31?

15:24:39 19 MR. RIVKIN: For the manual

15:24:41 20 integration on the IRMS.

15:24:53 21 THE WITNESS: That's MDP 31.

15:24:56 22 Manual integration on the IRMS is the

15:24:58 23 MDP 31 for manual integration.

15:25:05 24 MR. RIVKIN: There is a

15:25:06 25 standard operating procedure for the

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15:25:08 2 manual integration?

15:25:16 3 THE WITNESS: Yes, there is.

15:25:17 4 For the IRMS it's MDP 31.

15:25:20 5 MR. RIVKIN: There are

15:25:21 6 written procedures for how to manually

15:25:23 7 integrate?

15:25:27 8 THE WITNESS: Yes.

15:25:30 9 MR. RIVKIN: Okay. Thank

15:25:31 10 you.

15:25:51 11 THE WITNESS: May I have the

15:25:52 12 page reference, please.

15:25:53 13 Q. Yes, the page references are

15:25:56 14 LNDD 1339. They're up on the screen.

15:26:01 15 And LNDD 1362. And that would be

15:26:22 16 Exhibit 91.

15:26:33 17 A. In fact I need the profile

15:26:35 18 too, the other report that comes out of

15:26:40 19 the GC/MS.

15:26:47 20 Q. 1339 is the GC/MS

15:26:49 21 chromatogram and 1362 is the IRMS

15:26:52 22 chromatogram.

15:27:08 23 A. Okay. The 1339 is the GC/MS

15:27:14 24 report and I need the chromatogram.

15:27:20 25 Q. It's on the top. Ms.

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15:27:21 2 Frelat, it's right on the top there.

15:27:27 3 A. No, that's not what I'm  
15:27:28 4 talking about. It's not a problem.

15:27:48 5 Q. Can you show us how you do  
15:27:51 6 your first step of your peak pattern  
15:28:00 7 matching by comparing these two  
15:28:02 8 chromatograms?

15:28:04 9 A. I would really rather have  
15:28:23 10 had a bigger format to the page. First  
15:28:45 11 of all, I looked to see the 5-alpha  
15:28:49 12 androstanol acetate. With this method  
15:29:06 13 we know that we have to set the -- we  
15:29:11 14 have to set the internal standard time  
15:29:20 15 at 870 seconds, approximately. I'm  
15:29:58 16 sorry, it's just really tiny. When  
15:30:08 17 we're doing a GC/MS analysis in order  
15:30:10 18 to do the comparison better with the  
15:30:14 19 chromatograph what the -- what this  
15:30:22 20 image is showing me is the  
15:30:23 21 identification using the criteria. We  
15:30:29 22 also refer to a page like this one  
15:30:36 23 where we also see the GC/MS profile.

15:30:45 24 Q. Ms. Frelat, may I ask you  
15:30:47 25 this question. Sometimes when you look



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15:30:48 2 at the GC/MS chromatogram in your  
15:30:54 3 pre-identification step and you compare  
15:30:56 4 it to your GC/C/IRMS chromatogram, that  
15:31:04 5 it is easier or more difficult to peak  
15:31:09 6 pattern match; is that fair? Sometimes  
15:31:12 7 it's easier, sometimes it's harder?

15:31:17 8 A. The profiles are similar so  
15:32:00 9 it isn't easy. The profiles are close  
15:32:13 10 so it's fairly easy. When the sheets  
15:32:19 11 have the same dimensions.

15:32:35 12 Q. So you can see, Ms. Frelat,  
15:32:37 13 that there is a pattern it's just hard  
15:32:41 14 to see because the chromatogram is  
15:32:43 15 small; is that right?

15:32:46 16 A. The window itself is small.

15:33:16 17 Q. But can you see a peak  
15:33:19 18 pattern?

15:33:24 19 A. Yes.

15:33:25 20 Q. I'm going to have a laser  
15:33:27 21 pointer brought to you. Or if someone  
15:33:31 22 on that side has a laser pointer.

15:33:33 23 MR. DUNN: We've got one.

15:33:34 24 Q. Could you show to the panel  
15:33:36 25 where that peak pattern is.

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15:33:48 2 A. The small window in the  
15:33:50 3 report is the GC/MS profile and this is  
15:33:55 4 the IRMS profile. So this is IRMS.  
15:34:13 5 And this is GC/MS.

15:34:19 6 MR. RIVKIN: The question is  
15:34:20 7 can you show us the peak pattern. What  
15:34:23 8 peaks correspond to which peaks?

15:34:29 9 A. Excuse me. The internal  
15:35:06 10 standard is here.

15:35:08 11 Q. And how do you know that's  
15:35:09 12 the internal standard?

15:35:12 13 A. We identified it in GC/MS on  
15:35:25 14 the report as 10.86.

15:35:28 15 Q. You identified it by the  
15:35:30 16 retention time, correct?

15:35:40 17 A. Yes.

15:35:41 18 Q. I'm actually asking a  
15:35:45 19 different question. I'm asking you to  
15:35:46 20 show in your first step, your peak  
15:35:50 21 pattern matching step show us the  
15:35:54 22 pattern of how you would identify --  
15:36:00 23 you can even take the internal  
15:36:01 24 standard. For example, if you say this  
15:36:03 25 one or one of these right here is the

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15:36:05 2 internal standard, can you show us how  
15:36:07 3 that pattern matches up with any of  
15:36:08 4 these peaks down here.

15:36:11 5 A. Here is a large peak which  
15:36:55 6 is down here is at this point. And  
15:37:03 7 there is the internal standard which  
15:37:06 8 I've identified in GC/MS here with  
15:37:10 9 another peak next to it.

15:37:22 10 THE INTERPRETER: Excuse me,  
15:37:23 11 I'm sorry, I'm going to ask the witness  
15:37:25 12 to repeat that for me, I didn't  
15:37:27 13 understand what she said.

15:37:29 14 A. I adjusted the quantity of  
15:37:32 15 the internal standard for the IRMS  
15:37:38 16 injection. So in the IRMS they're a  
15:37:45 17 little bit bigger. So this peak here  
15:37:48 18 is a little bigger. Here's another  
15:37:59 19 peak which below is found here. And  
15:38:13 20 this peak that I indicated at the  
15:38:14 21 bottom is this one that I'm indicating  
15:38:16 22 at the top.

15:38:32 23 This one is this one. I'm  
15:38:46 24 just looking at the sheet. This one is  
15:39:02 25 that one.

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15:39:04 2 Q. And are you looking at  
15:39:05 3 retention times or are you just looking  
15:39:08 4 at the peak pattern?

15:39:10 5 A. Well here I'm looking at the  
15:39:20 6 peaks.

15:39:21 7 Q. Do you know what the  
15:39:22 8 retention times of the target analytes  
15:39:24 9 -- target metabolites are?

15:39:31 10 A. Well in this case I can -- I  
15:39:37 11 can see on the GC/MS I can see what the  
15:39:42 12 time is.

15:39:46 13 Q. So you know what the  
15:39:48 14 retention times are?

15:39:50 15 A. In GC/MS, yes.

15:39:55 16 Q. And is that -- are you using  
15:39:59 17 that to help you do your peak pattern  
15:40:03 18 matching?

15:40:11 19 A. Well, because I've got it  
15:40:12 20 right in front of me, that's why I  
15:40:14 21 mentioned it.

15:40:15 22 Q. Just for clarity's sake, I'm  
15:40:17 23 going to hand you paper copies of what  
15:40:21 24 we're looking at up on the screen and  
15:40:23 25 if you could circle -- if I could hand

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15:40:30 2 them to the panel and the panel could  
15:40:32 3 hand them to her.

15:40:33 4 MR. RIVKIN: Send them  
15:40:34 5 across.

15:40:41 6 THE PRESIDENT: Could we  
15:40:42 7 mark these in some fashion, just call  
15:40:45 8 them Frelat 1 and 2.

15:40:51 9 MS. SLOAN: I'm sorry, you  
15:40:53 10 said?

15:40:54 11 THE PRESIDENT: Frelat 1 and  
15:40:56 12 2.

15:40:57 13 (Frelat Exhibits 1 and  
15:41:11 14 2 for identification.)

15:41:11 15 THE PRESIDENT: Just so that  
15:41:13 16 Mr. Suh knows which is which, just show  
15:41:17 17 him which is 1 and which is 2?

15:41:22 18 MS. SLOAN: Frelat 2 is  
15:41:27 19 1339.

15:41:32 20 THE INTERPRETER: Mr. Suh,  
15:41:33 21 I'm sorry, you asked her to do what?

15:41:36 22 Q. Do you have different color  
15:41:39 23 pens with you? Maybe a red pen and a  
15:41:50 24 green pen. Could you circle the  
15:41:52 25 internal standard on both with say the

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15:41:59 2 green pen and the target metabolite  
15:42:02 3 with the red pen.

15:43:48 4 A. Could I just circle the peak  
15:43:57 5 number on the chromatograph?

15:43:59 6 Q. That's fine. That's fine.

15:44:13 7 A. I've done it.

15:44:32 8 MR. SUH: How about we make  
15:44:34 9 color copies and until then we'll leave  
15:44:36 10 them with the panel.

15:44:39 11 THE PRESIDENT: Mr. Young,  
15:44:39 12 do you want to see these?

15:44:42 13 MR. YOUNG: Yes, I do.  
15:44:44 14 Thank you.

15:44:47 15 Q. Let's turn to the second  
15:44:49 16 step that's listed on Page 2 and that's  
15:44:55 17 the IRMS peak identification based on  
15:44:59 18 retention time and relative retention  
15:45:01 19 time in the analytes in the blank  
15:45:34 20 urine. And there's no SOP for this  
15:45:36 21 method either, correct?

15:45:38 22 A. There is no SOP.

15:45:47 23 Q. I'd like to show you LNDD  
15:45:50 24 309 and 310 of Exhibit 26. If you  
15:46:20 25 could take a moment to look at 309 and

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15:46:23 2 310 and after you're done looking at it  
15:46:34 3 explain what they are.

15:46:54 4 A. It's a report sheet  
15:46:58 5 characterization of a blank urine.

15:47:05 6 Q. Now, looking at 310, there  
15:47:07 7 are some isotopic values for blank  
15:47:10 8 urine, correct?

15:47:11 9 A. Yes, there are isotopic  
15:47:23 10 values.

15:47:24 11 Q. Now, in order for this  
15:47:25 12 method to work, you would need to be  
15:47:28 13 able to identify these peaks in the  
15:47:32 14 blank urine, correct?

15:47:33 15 A. Yes.

15:47:55 16 Q. And these are the values  
15:47:59 17 that you are saying you used to compare  
15:48:02 18 retention time and relative retention  
15:48:05 19 time, correct?

15:48:06 20 A. I don't use this document  
15:48:20 21 for my urine blank, I use -- when a  
15:48:34 22 sample is injected, for example,  
15:48:36 23 fraction 1, first of all, there is the  
15:48:41 24 urine blank fraction 1 which is  
15:48:43 25 injected and I base it on what's in the

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15:48:51 2 report. This report is to show the  
15:49:06 3 blank urine values before anything --  
15:49:10 4 before any injection with samples.

15:49:14 5 Q. Let me draw a very crude  
15:49:17 6 diagram, a very simple diagram just to  
15:49:21 7 make sure that everybody understands.  
15:49:35 8 In your declaration you say you cannot  
15:49:38 9 use retention time and relative  
15:49:42 10 retention time between these two  
15:49:45 11 instruments to identify your  
15:49:48 12 metabolites, correct?

15:50:12 13 A. I do not compare retention  
15:50:15 14 time and relative retention time  
15:50:17 15 between the GC/MS and the IRMS.

15:50:21 16 Q. Although you were in fact --  
15:50:26 17 well, let me take this next step next.  
15:50:31 18 So what you are explaining to the panel  
15:50:33 19 is that instead of using the GC/MS  
15:50:37 20 chromatogram you're using the blank  
15:50:39 21 urine chromatogram, right, or blank  
15:50:44 22 urine values?

15:50:46 23 A. Yes, the retention time of  
15:50:54 24 the blank urine.

15:50:55 25 Q. But in order for this method



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15:50:56 2 to work, once again, you would have to  
15:50:59 3 have a preceding step in which you  
15:51:02 4 would be able to make sure that the  
15:51:05 5 testosterone metabolites that you have  
15:51:07 6 values for are in fact properly  
15:51:10 7 identified at some previous time,  
15:51:13 8 correct?

15:51:14 9 A. The initial study of the  
15:51:47 10 blank urine starts with preparation at  
15:51:58 11 every identification of metabolites  
15:52:01 12 using GC/MS and so a print of the  
15:52:10 13 chromatographic profile, and next we do  
15:52:19 14 an injection with IRMS. The injection  
15:52:22 15 is done three times so that we can get  
15:52:28 16 -- so that we can get an average  
15:52:33 17 result, a median result for blank  
15:52:39 18 urine.

15:52:41 19 Q. So there was some prior step  
15:52:45 20 in which you identified the blank urine  
15:52:51 21 peaks, correct? You needed to be able  
15:52:56 22 to identify -- to show that you  
15:52:58 23 properly identified the blank urine  
15:53:00 24 peaks in order to say that the value,  
15:53:03 25 the isotopic values you have for those

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15:53:06 2 peaks in fact belong to those

15:53:09 3 metabolites, correct?

15:53:11 4 A. The urine blank -- the blank

15:53:53 5 urine uses the same process as the

15:53:58 6 sample. It's prepared, it's identified

15:54:04 7 on GC/MS and then injected on IRMS to

15:54:11 8 get the isotopic values.

15:54:31 9 Q. All right. And who trained

15:54:42 10 you how to perform this technique?

15:54:45 11 A. What technique are you

15:54:56 12 talking about?

15:54:57 13 Q. The technique you talked

15:54:58 14 about with the pattern matching first

15:55:00 15 and then the blank urine relative

15:55:07 16 retention time.

15:55:21 17 A. Cynthia.

15:55:44 18 Q. I'd like to turn your

15:55:45 19 attention now to manual integration.

15:55:57 20 The manual integration process is the

15:56:00 21 process by which you start -- you move

15:56:03 22 the start and end of peaks when you

15:56:06 23 believe that the peak is somehow or the

15:56:10 24 data is somehow not good enough as

15:56:15 25 processed by the instrument and the

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15:56:17 2 computer software by itself; is that  
15:56:19 3 fair?

15:56:20 4 A. Yes, manual integration is  
15:56:59 5 when -- I'm really having a hard time  
15:57:12 6 expressing this, but when I'm checking  
15:57:24 7 -- when a result comes out on the  
15:57:26 8 IsoPrime 1 or the IsoPrime 2 I check to  
15:57:30 9 see if the results are correct and if  
15:57:40 10 it seems to me that results are not  
15:57:43 11 correct then I use manual integration.

15:57:48 12 Q. How do you know when the  
15:57:50 13 results are not correct?

15:57:52 14 A. By looking at how and at  
15:58:06 15 what level it's identified the  
15:58:08 16 beginning and the end of the peak --  
15:58:13 17 it's integrated the start and end of  
15:58:15 18 the peak.

15:58:18 19 Q. And how do you know that it  
15:58:19 20 has properly integrated the start and  
15:58:23 21 end of the peak?

15:58:26 22 A. By looking at the screen,  
15:58:44 23 looking at the information on the chart  
15:58:46 24 and seeing where it's put the cursor  
15:58:53 25 using the two to one trace.

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15:58:59 2 MR. PAULSSON: Ratio.

15:59:03 3 THE INTERPRETER: Using the  
15:59:04 4 two to one ratio, excuse me.

15:59:10 5 Q. Of course you're familiar  
15:59:11 6 with the IRMS test sequence which  
15:59:13 7 begins with stability runs to Mix Cal,  
15:59:18 8 IRMS runs to Mix Cal Acetate, to the  
15:59:21 9 sample runs ending with another Mix Cal  
15:59:24 10 Acetate run, correct?

15:59:24 11 A. Yes, it's one of my  
15:59:56 12 processes. That is the -- that is the  
16:00:00 13 order, that is the sequential order.

16:00:03 14 Q. And do you manually  
16:00:06 15 integrate Mix Cal IRMS?

16:00:11 16 A. I verify that the  
16:00:20 17 integrations were properly done.

16:00:22 18 Q. And how do you verify that  
16:00:24 19 integrations are properly done?

16:00:28 20 A. I put up the chromatograph.  
16:00:54 21 Then I put up the two to one ratio.  
16:01:00 22 And I look to see where it's put the  
16:01:06 23 cursor to see if it's too far back or  
16:01:08 24 too far forward.

16:01:13 25 Q. And when you move the start

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16:01:15 2 and stop of the end peaks -- start and  
16:01:17 3 stop of the peak it will change the  
16:01:21 4 isotopic calculation of that peak; is  
16:01:24 5 that correct?

16:01:24 6 A. Yes, that can, yes, it could  
16:01:42 7 change.

16:01:44 8 Q. And you've manually  
16:01:45 9 integrated the Mix Cal IRMS, correct?

16:01:51 10 A. Which Mix Cal IRMS?

16:01:59 11 Q. I'm asking generally. Have  
16:02:01 12 you integrated Mix Cal IRMS generally?

16:02:06 13 A. Sometimes it's necessary,  
16:02:15 14 sometimes it's not necessary.

16:02:17 15 Q. And turning your attention  
16:02:18 16 to the Mix Cal Acetate, do you  
16:02:21 17 sometimes manually integrate the Mix  
16:02:27 18 Cal Acetate peaks?

16:02:37 19 A. Sometimes.

16:02:39 20 Q. And you would agree that the  
16:02:42 21 chromatograms in the Mix Cal IRMS and  
16:02:46 22 the Mix Cal Acetate are much cleaner  
16:02:48 23 generally than the chromatograms in  
16:02:50 24 your samples?

16:02:59 25 A. Yes, they are cleaner. Yes,

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16:03:23 2 they are cleaner. It's a standard.

16:03:41 3 There are standards in the solvent and

16:03:45 4 the solvent is hexane.

16:03:59 5 Q. And you're aware of course

16:04:00 6 that for a Mix Cal Acetate you are --

16:04:07 7 at least three of the four target

16:04:11 8 isotopes must be within a certain

16:04:16 9 measurement of uncertainty, correct?

16:04:39 10 A. Yes, that's correct.

16:04:41 11 Q. I'd like the turn your

16:04:58 12 attention -- by the way, just so it's

16:05:00 13 clear, you were the LNDD technician who

16:05:03 14 processed Mr. Landis' B sample for

16:05:06 15 sample 995474, correct, for stage 17?

16:05:13 16 A. Yes.

16:05:31 17 Q. I'd like to show you USADA

16:05:37 18 346 which is in Exhibit 25. By the

16:06:18 19 way, do you recognize USADA 346 as the

16:06:24 20 blank urine F2, the blank F2 for sample

16:06:31 21 B for 995474? Excuse me, it's the F3.

16:06:55 22 A. It is the F3 blank urine.

16:07:00 23 Q. And did you manually

16:07:01 24 integrate this chromatogram? Did you

16:07:16 25 manually integrate the data which this

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16:07:20 2 chromatogram represents, manually

16:07:25 3 integrate the peaks?

16:07:28 4 A. Yes, certainly.

16:07:41 5 Q. And did you manually

16:07:45 6 integrate the internal standard?

16:07:48 7 A. I verified all the peaks

16:08:06 8 that I'm concerned with so that would

16:08:08 9 be the internal standard 5-beta

16:08:13 10 acetate, 6 alpha acetate and the Pdiol.

16:08:24 11 I verified the integration of the

16:08:26 12 internal standard 5-beta, 5-alpha and

16:08:31 13 Pdiol acetate.

16:08:41 14 Q. And do you know what the

16:08:44 15 isotopic values were of the peaks

16:08:49 16 before you conducted a manual

16:08:51 17 integration?

16:08:51 18 A. I don't remember.

16:09:05 19 Q. But you do remember manually

16:09:10 20 integrating all of those peaks,

16:09:12 21 correct?

16:09:13 22 A. When I do verification I

16:09:26 23 look at all the peaks that are of

16:09:29 24 interest. I don't know if I did any

16:09:46 25 manual integration of all the peaks, of

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16:09:52 2 the software of all the peaks.

16:09:54 3 Q. In any case, there's no  
16:09:56 4 record of if you did what the isotopic  
16:09:59 5 values were of the peaks? If you did  
16:10:04 6 conduct a manual integration which I  
16:10:06 7 understand you do remember, but if you  
16:10:08 8 did, and the values changed, there's no  
16:10:11 9 way to know now what the values  
16:10:13 10 originally were; is that correct?

16:10:16 11 A. No, it's not correct. We  
16:10:40 12 did a manual reprocess -- in May they  
16:10:53 13 asked us to give us the integration  
16:11:04 14 value from the software with manual  
16:11:11 15 integration redone by us without  
16:11:18 16 subtracting the background, without  
16:11:23 17 subtracting the background.

16:11:32 18 Q. Ms. Frelat, is what you are  
16:11:36 19 referring to is the time when Dr. Davis  
16:11:40 20 and other people came to LNDD and  
16:11:45 21 conducted a reprocessing of these  
16:11:49 22 values? Do you remember that day? As  
16:11:57 23 part of this case there was a time when  
16:11:59 24 Mr. Landis' representatives came to  
16:12:04 25 LNDD. Is that what you're talking



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16:12:05 2 about now?

16:12:06 3 A. I'm talking about the fact

16:12:39 4 that they asked us to reprocess the

16:12:43 5 data that was collected by the IRMS.

16:12:46 6 Q. That's not what I'm talking

16:12:47 7 about. I'm talking about this. The

16:12:51 8 data that is represented here on this

16:12:53 9 chromatogram, let's take this one for

16:12:56 10 an example, you say you don't remember

16:12:58 11 whether or not you reprocessed any of

16:13:01 12 these peaks. But if you did, if you

16:13:04 13 did, is there any record of where the

16:13:09 14 original values -- what the original

16:13:12 15 values were?

16:13:49 16 A. The values that are required

16:13:56 17 by the software are protected, are

16:14:01 18 kept, maintained.

16:14:02 19 MR. PAULSSON: Saved.

16:14:04 20 A. Saved.

16:14:05 21 THE INTERPRETER: Thank you.

16:14:06 22 Q. That's not my question

16:14:07 23 either.

16:14:07 24 MR. RIVKIN: Can I try to

16:14:08 25 simplify it for you?

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16:14:11 2 MR. SUH: Sure.

16:14:12 3 MR. RIVKIN: The underlying  
16:14:13 4 data was saved by the computer; is that  
16:14:23 5 right?

16:14:24 6 THE WITNESS: Yes.

16:14:24 7 MR. RIVKIN: But what we  
16:14:26 8 don't know and can't look at now is  
16:14:28 9 when your IRMS ran the first analysis  
16:14:33 10 of that underlying data, before you  
16:14:36 11 manually integrated, we cannot look at  
16:14:39 12 now what the values were that the  
16:14:42 13 computer assigned to the various peaks;  
16:14:45 14 isn't that right?

16:14:53 15 THE WITNESS: If we only had  
16:15:23 16 the B doc pack that would be correct.  
16:15:39 17 But the gross data was requested later  
16:15:45 18 so they are available. So those data  
16:15:47 19 are available.

16:15:48 20 MR. RIVKIN: I think that  
16:15:49 21 gives you what you need. I don't think  
16:16:05 22 there's any contest between the parties  
16:16:07 23 as to that. The original data was  
16:16:08 24 there. We don't know what the screen  
16:16:11 25 first showed when she first looked at

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16:16:12 2 it on the IRMS and she just said that.

16:16:15 3 MR. SUH: Or even --

16:16:17 4 MR. RIVKIN: If she manually  
16:16:18 5 integrated or not.

16:16:20 6 MR. SUH: If she manually  
16:16:22 7 integrated the point is there's no  
16:16:23 8 record of it.

16:16:25 9 MR. RIVKIN: Right. Mr.  
16:16:26 10 Young seems to disagree with what I  
16:16:28 11 thought the parties agreed to.

16:16:30 12 THE PRESIDENT: This may be  
16:16:31 13 a terrific time to have 15 minutes  
16:16:34 14 break where Mr. Suh considers where the  
16:16:38 15 questioning goes next and we'll have a  
16:16:41 16 bit of a refresher.

16:16:42 17 Mr. Young, before we do  
16:16:44 18 that, I understand Mr. Rivkin's  
16:16:46 19 analysis is not what you think is the  
16:16:47 20 position.

16:16:49 21 MR. YOUNG: It is, but I can  
16:16:51 22 -- I don't want to prompt the witness  
16:16:53 23 in any way so --

16:16:55 24 MR. SUH: You can deal with  
16:16:57 25 that if you have to in reexamination.

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16:16:59 2 MR. YOUNG: Right.

16:17:11 3 THE PRESIDENT: Just a  
16:17:12 4 moment, please.

16:17:13 5 MR. PAULSSON: I thought  
16:17:14 6 that you said you were sure you had  
16:17:16 7 done a manual reintegration?

16:17:21 8 THE WITNESS: Well, yes, it  
16:17:23 9 was quite probable.

16:17:33 10 THE PRESIDENT: 15 minutes.

16:17:39 11 (A recess was taken.)

16:39:22 12 THE PRESIDENT: Mr. Suh.

16:39:25 13 MR. SUH: Yes, thank you.

16:39:45 14 Q. Ms. Frelat, I would like to  
16:39:48 15 turn your attention to some of your  
16:39:53 16 prior testimony at the AAA and  
16:40:01 17 specifically to Page 727. Actually,  
16:40:28 18 could you begin with Page 725. And  
16:40:35 19 again, there were a series of questions  
16:40:42 20 by me to you and we were talking about  
16:40:53 21 the determination of where the peak  
16:40:55 22 should begin and where it should end.  
16:40:57 23 That's line 9 of Page 725 about manual  
16:41:02 24 integration. And it goes on to say,  
16:41:17 25 you go on to testify on the top of Page

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16:41:19 2 726 that "It is written that we have to  
16:41:25 3 be very careful" -- I'm sorry, this is  
16:41:31 4 a translation issue. Page 726, line 19  
16:41:45 5 where you answer "It is written that  
16:41:48 6 one must be careful because, otherwise,  
16:41:50 7 there could be a significant change in  
16:41:51 8 the results."

16:42:06 9 THE PRESIDENT: May I  
16:42:08 10 intervene here. I'm assuming that we  
16:42:10 11 -- is that a French translation of the  
16:42:12 12 transcript because if it isn't we need  
16:42:15 13 to go back and read to the witness the  
16:42:18 14 introductory passages rather than just  
16:42:21 15 give her one little sound bite.

16:42:25 16 MR. SUH: That's right.

16:42:29 17 THE PRESIDENT: So could you  
16:42:30 18 tell us where the translator should  
16:42:32 19 begin reading.

16:42:33 20 MR. BARNETT: Can we also  
16:42:34 21 explain to the witness that she can ask  
16:42:37 22 the translator to read more if she  
16:42:38 23 needs to.

16:42:39 24 MR. SUH: Frankly, it's our  
16:42:41 25 understanding that she is conversant in

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16:42:44 2 English and if she doesn't feel she  
16:42:46 3 needs the translation, that's fine  
16:42:49 4 also.

16:42:49 5 THE PRESIDENT: First of all  
16:42:51 6 I'll ask the question how is your  
16:42:52 7 ability to read English? Or would you  
16:43:01 8 prefer to have it read to you?

16:43:07 9 THE WITNESS: I can read in  
16:43:12 10 English. But sometimes there are  
16:43:17 11 subtleties that I don't understand.

16:43:21 12 THE PRESIDENT: I think in  
16:43:22 13 that case we will have you read the  
16:43:23 14 passage. Mr. Suh, could you please  
16:43:26 15 tell us where we should start and  
16:43:28 16 finish the reading.

16:43:30 17 MR. SUH: Sure.

16:43:31 18 Q. Why don't we begin on Page  
16:43:34 19 725, line 9 through to Page 727, line  
16:43:50 20 25, the bottom of the page.

16:43:57 21 THE PRESIDENT: Thank you,  
16:43:58 22 go ahead.

16:43:59 23 MR. YOUNG: Maurice, you may  
16:44:00 24 be working off different versions of  
16:44:02 25 the transcript. What does your 725,

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16:44:04 2 line 9 say?

16:44:10 3 MR. SUH: It begins with  
16:44:11 4 the question, "You then make a  
16:44:13 5 determination" --

16:44:16 6 MR. YOUNG: Okay, we're  
16:44:17 7 okay.

16:48:11 8 Q. And then one other section  
16:48:15 9 on Page 729 beginning at line 3, it  
16:48:24 10 begins "And can you point to an SOP  
16:48:29 11 where it defines a significant  
16:48:30 12 difference" and just down to on that  
16:48:33 13 same page 729, line 11.

16:49:15 14 My question for you is this:  
16:49:17 15 Since the time of your testimony has  
16:49:19 16 anyone at LNDD approached you and  
16:49:23 17 informed you that your statements about  
16:49:28 18 your personal idea of what a  
16:49:31 19 significant difference of 1.5 to 1.6  
16:49:35 20 mil is is incorrect, or that you  
16:49:39 21 shouldn't adopt in your own mind a  
16:49:44 22 significant difference of 1.5 to 1.6  
16:49:51 23 mil?

16:49:59 24 A. No, in fact, in my testimony  
16:50:41 25 I had misunderstood. I thought you

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16:50:48 2 were talking about isotopic values and  
16:50:53 3 not about differences. But you were at  
16:50:57 4 -- that's what you were talking about,  
16:50:59 5 right?

16:51:07 6 Q. Let me ask you this  
16:51:09 7 question. Has anyone approached you  
16:51:10 8 since your testimony back in May of  
16:51:18 9 2007 and questioned you about your  
16:51:22 10 statements regarding the contents of  
16:51:27 11 your testimony that you've just read?

16:51:29 12 A. Nobody has asked me.

16:51:52 13 Q. So you've not talked about  
16:51:54 14 this piece of testimony with anyone; is  
16:52:02 15 that right?

16:52:02 16 A. I've discussed it but  
16:52:11 17 nobody's questioned me about it.

16:52:13 18 Q. And what was the course --  
16:52:15 19 what was the nature of your discussions  
16:52:17 20 about it?

16:52:18 21 A. What were we talking about.  
16:52:35 22 I don't remember the question exactly,  
16:52:38 23 but it must have been what were you  
16:52:42 24 talking about when you said 1.5, 1.6  
16:52:47 25 per mil.



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16:52:47 2 Q. And who were those  
16:52:48 3 discussions with?

16:52:50 4 A. My colleagues.

16:52:53 5 Q. And which colleagues?

16:52:58 6 A. Well, Cynthia, Corinne and  
16:53:10 7 perhaps others who were there when I  
16:53:12 8 gave my testimony.

16:53:20 9 Q. By Cynthia you mean Cynthia  
16:53:23 10 Mongongu?

16:53:25 11 A. Yes.

16:53:25 12 Q. And by Corinne you mean  
16:53:27 13 Corinne Buisson?

16:53:28 14 A. Yes.

16:53:28 15 Q. And did you talk about this  
16:53:31 16 part of your testimony with Mr. de  
16:53:53 17 Ceaurriz?

16:53:53 18 A. I don't know. Perhaps.

16:54:01 19 Q. Is it your testimony that  
16:54:04 20 you don't remember ever talking about  
16:54:05 21 it with Mr. de Ceaurriz or that you do  
16:54:09 22 remember talking about it?

16:54:12 23 A. I don't remember.

16:54:25 24 Q. And you do remember talking  
16:54:27 25 about it with Dr. Buisson and Ms.

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16:54:32 2 Mongongu; is that correct?

16:54:34 3 A. No, I think I talked about  
16:54:45 4 it, but I don't remember.

16:54:52 5 Q. So is it your testimony that  
16:54:53 6 you don't remember talking about it at  
16:54:56 7 all or that you just don't remember  
16:54:57 8 with whom you have talked about it?

16:55:01 9 A. I don't know. I know that I  
16:55:27 10 rethought this reply a lot because I  
16:55:32 11 felt lost and in particular when Mr.  
16:55:42 12 Suh was talking to me about the  
16:55:47 13 uncertainty of the measurements in the  
16:55:50 14 method.

16:55:54 15 Q. So your testimony is you are  
16:55:56 16 unsure whether or not you have spoken  
16:55:58 17 about it with anyone; is that right?

16:56:10 18 A. I just no longer know. I  
16:56:15 19 don't know.

16:56:15 20 Q. Let's turn to a new subject.  
16:56:55 21 In your declaration, that would be RD  
16:57:05 22 7.95, you talk about the 5-alpha AC  
16:57:12 23 internal standard.

16:57:35 24 A. Yes, I spoke about the  
16:57:36 25 standard, internal standard.

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16:57:39 2 Q. All right. In your  
16:57:55 3 declaration you testify that "the  
16:57:59 4 retention time of the internal  
16:58:01 5 standard, 5-alpha AC, is set at  
16:58:05 6 approximately 870 seconds." Do you see  
16:58:09 7 that?

16:58:26 8 A. Yes.

16:58:26 9 Q. And what you mean by that is  
16:58:29 10 that you perform an operation that in  
16:58:33 11 essence forces the internal standard,  
16:58:40 12 5-alpha AC, to elute at 870 seconds?

16:58:45 13 A. The impression of -- the  
16:59:18 14 helium pressure which is the vector gas  
16:59:24 15 that goes into the column is regulated,  
16:59:29 16 governed so that the AC should come out  
16:59:36 17 at 870 seconds. The pressure of the  
16:59:50 18 helium which is the vector gas is  
16:59:54 19 regulated, adjusted so that the AC  
16:59:57 20 comes out at 870 seconds.

17:00:00 21 Q. Now, this is a standard  
17:00:06 22 procedure that you perform in all IRMS  
17:00:10 23 tests, correct?

17:00:11 24 A. What worries me a bit is the  
17:00:36 25 standard procedure.

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17:00:40 2 Q. What worries you about that?

17:00:44 3 A. It's not something that is  
17:00:54 4 done every day. The pressure is  
17:01:03 5 adjusted when there is some kind of  
17:01:06 6 intervention, for example, when the  
17:01:11 7 column is changed or when the column is  
17:01:20 8 -- when there is a cut in the column,  
17:01:36 9 we inject a Mix Cal Acetate. We look  
17:01:43 10 to see at what time the AC is coming  
17:01:49 11 out, eluting --

17:01:54 12 MS. HATTON: The SI.

17:01:56 13 MR. SUH: At this point I  
17:01:57 14 would object. This is no longer proper  
17:01:59 15 to have the consulting expert of USADA  
17:02:01 16 shout out the answers.

17:02:05 17 MR. BARNETT: By answers you  
17:02:06 18 mean the correct translation.

17:02:09 19 MR. SUH: We have a translator  
17:02:10 20 to do the correct translation.

17:02:13 21 MR. BARNETT: I think the  
17:02:14 22 panel recognizes there have been some  
17:02:16 23 technical difficulties, no fault in the  
17:02:18 24 translator, getting up to speed.

17:02:21 25 MR. PAULSSON: I don't think

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17:02:21 2 the interpreter has to accept the  
17:02:23 3 suggestions that are being made by  
17:02:25 4 anyone or myself.

17:02:26 5 MR. SUH: True, but the  
17:02:27 6 witness is also hearing statements  
17:02:29 7 being made by the consulting expert  
17:02:31 8 which, you know, many times we can't  
17:02:33 9 hear ourselves.

17:02:38 10 MR. YOUNG: But the witness  
17:02:39 11 has already given her testimony.

17:02:41 12 MR. PAULSSON: The witness  
17:02:42 13 has already spoken and the suggestions  
17:02:44 14 that are being made have to do with the  
17:02:45 15 correction of what was actually said.

17:02:48 16 MR. SUH: Sometimes I can't  
17:02:49 17 hear what is being said. So I mean I  
17:02:51 18 would assume that that's true and I  
17:02:53 19 know that it's been true sometimes, but  
17:02:55 20 it just seems odd to have --

17:02:58 21 THE PRESIDENT: Mr. Suh, what  
17:02:59 22 we'll do is have a procedure now where  
17:03:05 23 only Mr. Paulsson and our secretary who  
17:03:08 24 speaks French can intervene. We will  
17:03:11 25 have no interventions and corrections

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17:03:14 2 from the table.

17:03:15 3 MR. SUH: Thank you. I

17:03:24 4 apologize, Mr. Paulsson.

17:03:30 5 THE INTERPRETER: Where

17:03:31 6 should we resume?

17:03:42 7 MR. SUH: Would you read

17:03:43 8 back the last question.

17:03:45 9 MR. YOUNG: Before she does,

17:03:46 10 Mr. Chair, would you accept a procedure

17:03:49 11 that Ms. Hatton hears something that

17:03:51 12 she doesn't think is correct, rather

17:03:53 13 than saying something, she simply

17:03:56 14 raises her hand?

17:03:59 15 THE PRESIDENT: Yes.

17:04:48 16 (Record read as requested.)

17:04:58 17 THE INTERPRETER: So we're

17:04:59 18 picking up from where there is a cut in

17:05:02 19 the column, we're correcting that.

17:05:04 20 A. When there is a column

17:05:05 21 change or when the top or the head of

17:05:09 22 the column is cut we inject Mix Cal

17:05:24 23 Acetate. We look to see the time at

17:05:27 24 which the internal standard comes out,

17:05:37 25 and if necessary we adjust the

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17:05:39 2 pressure. So that that time should be  
17:05:43 3 approximately 870 seconds.

17:05:51 4 MR. PAULSSON: I suggested  
17:05:52 5 to the witness to cut the answers in  
17:05:54 6 that way which works much better.

17:05:56 7 Q. And how close to 870 seconds  
17:06:02 8 is the 5-alpha AC set at?

17:06:11 9 A. We set the AC as close as  
17:06:52 10 possible to the value SI. We set the  
17:07:01 11 internal standard as close as possible  
17:07:04 12 to the value. The time can be from 860  
17:07:18 13 seconds to 880. Adjusting the pressure  
17:07:35 14 is -- sometimes changing the pressure  
17:07:49 15 by 2 psi can produce no change or could  
17:08:05 16 even produce a change of I would say 15  
17:08:08 17 seconds. So I adjust the pressure to  
17:08:16 18 get as close as possible.

17:08:18 19 Q. So in essence you are trying  
17:08:22 20 to get within plus or minus 10 seconds  
17:08:24 21 of 870 seconds, correct?

17:08:29 22 A. We try to adjust it to 870  
17:08:46 23 seconds and we get as close as we can  
17:08:53 24 to that value.

17:08:56 25 Q. And that's for the purpose

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17:08:58 2 of being able to identify the internal  
17:09:02 3 standard in the chromatogram; is that  
17:09:06 4 correct?

17:09:06 5 A. Yes.

17:09:17 6 Q. Now, I believe you testified  
17:09:26 7 or it's in your declaration here that  
17:09:29 8 "LNDD has not established any  
17:09:33 9 acceptance criteria for the delta value  
17:09:35 10 of the internal standard in a urine  
17:09:38 11 matrix." That's at the bottom of that  
17:09:42 12 one paragraph. And is that because to  
17:09:45 13 you it doesn't matter whether or not,  
17:09:48 14 you know, what the value of the  
17:09:50 15 internal standard is, the isotopic  
17:09:52 16 value of the internal standard is,  
17:09:55 17 because you are not using it as a  
17:09:59 18 quality control; is that correct?

17:10:46 19 A. Yes.

17:10:47 20 Q. Now, earlier you testified  
17:10:49 21 that you also manually integrate the  
17:10:52 22 internal standard within the sample,  
17:10:54 23 correct?

17:11:07 24 A. Yes, sometimes.

17:11:08 25 MR. PAULSSON: Sometimes.



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17:11:09 2 Q. Now, if the isotopic value  
17:11:12 3 of the internal standard does not  
17:11:15 4 matter because you are setting it at  
17:11:18 5 870 seconds, why would you manually  
17:11:20 6 integrate the internal standard within  
17:11:23 7 the sample?

17:11:25 8 A. For every peak of interest  
17:11:55 9 the -- for every peak of interest the  
17:12:07 10 internal standard is a part of that. I  
17:12:14 11 verify, I check the integration of the  
17:12:19 12 peaks.

17:12:23 13 Q. But of course if you know  
17:12:24 14 that the internal standard is going to  
17:12:27 15 elute at 870 seconds, there's no reason  
17:12:31 16 to manually integrate your peaks,  
17:12:34 17 correct? I mean if you don't care  
17:12:35 18 about the isotopic value of the  
17:12:38 19 internal standard, why would you  
17:12:41 20 manually integrate it?

17:12:58 21 A. It's like a reflex. You  
17:13:32 22 look to see if it's done correctly and  
17:13:35 23 if it's not done right then you go back  
17:13:40 24 to integration.

17:13:42 25 Q. All right. So let me make

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17:13:45 2 sure I understand. It doesn't matter  
17:13:51 3 whether or not the internal standard is  
17:13:53 4 out of the measurement of error for  
17:13:58 5 isotopic value because we're not using  
17:14:01 6 it as a quality control in the samples,  
17:14:04 7 correct?

17:14:05 8 A. I'm sorry, I'm tired. I'm  
17:14:43 9 losing it a bit. Sorry.

17:14:49 10 THE INTERPRETER: So I will  
17:14:50 11 repeat.

17:15:17 12 A. Correct.

17:15:18 13 Q. But you still manually  
17:15:26 14 integrate the internal standard within  
17:15:27 15 the sample sometimes out of reflex?

17:15:27 16 A. Yes.

17:15:48 17 Q. All right. I'm going to try  
17:15:49 18 to reask the question that we left off  
17:15:52 19 with at the break and make sure I  
17:15:57 20 explain my question well. Maybe it  
17:16:21 21 will help with a piece of paper. This  
17:16:30 22 is not a chromatogram. This is just a  
17:16:33 23 timeline. So point 1 when there is an  
17:16:39 24 isotopic value determined on a  
17:16:44 25 particular peak, there is an automatic

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17:16:46 2 calculation of it, correct?

17:17:00 3 A. Yes.

17:17:01 4 Q. I'm just going to put a one  
17:17:11 5 for that. Now, if you don't manually  
17:17:18 6 integrate the peak the isotopic value  
17:17:23 7 of this first instance is what is the  
17:17:28 8 value that's reported, correct?

17:17:33 9 A. Yes.

17:17:33 10 Q. Let's say, however, that you  
17:17:37 11 do manually integrate the peak. You  
17:17:50 12 manually integrate the peak and now the  
17:17:52 13 isotopic value changes, right? So that  
17:17:58 14 there's a different isotopic value from  
17:18:02 15 one to two, right?

17:18:03 16 A. Sometimes there's no change.

17:18:09 17 Q. Sometimes there's no change,  
17:18:11 18 sometimes there is. And sometimes when  
17:18:16 19 you conduct manual integration you do  
17:18:23 20 it more than once for each peak, right?

17:18:38 21 A. The verification -- the  
17:18:50 22 verification of the manual integration  
17:18:53 23 of the peak is done once. What can be  
17:19:01 24 done several times is the verification  
17:19:07 25 of background noise.

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17:19:15 2 Q. So if that operation is  
17:19:17 3 performed it may change the isotopic  
17:19:21 4 value of the peak, correct?

17:19:23 5 A. You're talking about the  
17:19:32 6 operation of manual integration?

17:19:41 7 Q. Yes. Let's say that that  
17:19:42 8 occurs after the first integration. Do  
17:19:47 9 you understand?

17:19:56 10 MR. PAULSSON: Three is  
17:19:57 11 noise removal?

17:20:00 12 Q. Three is background  
17:20:01 13 subtraction.

17:20:08 14 A. If you start with value  
17:20:10 15 number 1, we verify background noise.  
17:20:19 16 So every time -- every time we put a  
17:20:31 17 point for background noise where we  
17:20:36 18 think there is no peak by looking at  
17:20:44 19 the one for two trace, we do what Mr.  
17:20:56 20 Davis did when he reanalyzed and we  
17:21:01 21 look if the representation of  
17:21:08 22 background noise actually corresponds  
17:21:18 23 to the baseline of the chromatogram --  
17:21:22 24 chromatograph.

17:21:23 25 Q. And that operation will

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17:21:24 2 also, could also change the isotopic  
17:21:27 3 value of the peak, right?

17:21:29 4 A. Yes, depending on whether if  
17:21:50 5 the representation of background noise  
17:21:56 6 doesn't correspond at all to the  
17:22:00 7 baseline of the chromatograph when we  
17:22:07 8 -- when it -- when we make the changes  
17:22:19 9 there may be differences in the  
17:22:23 10 isotopic values.

17:22:26 11 Q. And my question for you is  
17:22:28 12 as part of these processes when you are  
17:22:30 13 moving the start and stop of the end  
17:22:34 14 peak and adjusting the background,  
17:22:36 15 before you finally decide on what  
17:22:38 16 values you wish to print, the isotopic  
17:22:43 17 values that you see changing as you do  
17:22:45 18 that are not recorded anywhere, right?

17:22:47 19 A. Yes, that's correct.

17:23:48 20 Q. Ms. Frelat, when were you  
17:23:50 21 trained on, what date were you trained  
17:23:51 22 on peak matching, peak pattern  
17:24:07 23 matching?

17:24:07 24 A. Peak matching?

17:24:08 25 Q. Yes, peak pattern matching.

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17:24:25 2 A. I got my training at the  
17:24:27 3 time I joined the IRMS department when  
17:24:33 4 I was trained in preparation and the  
17:24:39 5 analysis by GC/MS and IRMS of blank  
17:24:46 6 urine.

17:24:49 7 Q. I'm sorry, what was the date  
17:24:51 8 in which you were trained on peak  
17:24:54 9 matching?

17:24:55 10 THE PRESIDENT: Excuse me,  
17:24:57 11 Mr. Suh. Do you mean a precise date or  
17:24:59 12 the time in a month or a --

17:25:04 13 MR. SUH: Within a week.

17:25:22 14 A. I started my training end of  
17:25:27 15 January 2006. I must have been validated  
17:25:41 16 end of February 2006.

17:25:52 17 Q. So you were validated the  
17:25:54 18 end of February 2006, correct?

17:26:01 19 A. Yes.

17:26:05 20 Q. And as you testified at the  
17:26:09 21 AAA proceeding below, you were first  
17:26:14 22 allowed to work on a sample by yourself  
17:26:17 23 using the IRMS instrument at the end of  
17:26:19 24 February 2006?

17:26:23 25 A. Yes.

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17:26:43 2 Q. So is it fair to say that  
17:26:44 3 your training on the peak matching  
17:26:46 4 technique wasn't completed until the  
17:26:51 5 end of February 2006?

17:27:09 6 A. My training included  
17:27:23 7 everything, which is to say preparing  
17:27:29 8 samples, preparing the IRMS machine,  
17:27:43 9 and study of data.

17:27:44 10 Q. And what about manual  
17:27:46 11 integration, when was that training  
17:27:48 12 completed?

17:27:48 13 A. At the same -- during the  
17:27:56 14 same period.

17:27:57 15 Q. The same period meaning the  
17:27:58 16 end of February 2006?

17:28:02 17 A. Between the end of January  
17:28:05 18 and the end of February 2006.

17:28:08 19 Q. Prior to the end of February  
17:28:10 20 2006 you weren't permitted to work on a  
17:28:14 21 sample by yourself, an actual sample,  
17:28:18 22 but you were only allowed to use blank  
17:28:21 23 urine, correct?

17:28:23 24 A. Yes, that's correct.

17:28:37 25 Q. And that's because until the

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17:28:41 2 end of February 2006 you weren't fully  
17:28:46 3 versed in all of the techniques you  
17:28:48 4 just described? Let me -- I'm sorry,  
17:28:54 5 why don't you translate that part.

17:29:19 6 A. No, it's because my training  
17:29:22 7 hadn't been validated.

17:29:23 8 Q. Let me list the techniques  
17:29:26 9 or methods that I believe you've talked  
17:29:32 10 about but correct me if I'm wrong. So  
17:29:38 11 testosterone metabolite identification  
17:29:43 12 by peak matching, and the blank urine  
17:29:49 13 method you discussed, sample prep,  
17:29:59 14 manual integration and the GC/MS  
17:30:05 15 instrument and the IRMS instrument,  
17:30:13 16 correct?

17:30:14 17 A. I had actually done training  
17:30:23 18 on preparing the GC/MS instrument  
17:30:26 19 because I had been in the lab earlier.

17:30:29 20 Q. But leaving the GC/MS  
17:30:33 21 instrument training aside, the method  
17:30:36 22 we talked about you weren't fully  
17:30:38 23 trained in until the end of February of  
17:30:41 24 2006, correct?

17:30:49 25 A. I wouldn't say that. I



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17:31:08 2 would say I was trained but it's better  
17:31:17 3 to repeat things to validate your  
17:31:19 4 training.

17:31:21 5 Q. And you would agree with me  
17:31:23 6 that the methods that you described  
17:31:26 7 here today are -- and again let me list  
17:31:31 8 them, the peak matching, the blank  
17:31:33 9 urine, retention time, the sample prep,  
17:31:36 10 manual integration, all of these things  
17:31:39 11 are complex and require training,  
17:31:42 12 correct?

17:31:46 13 A. The preparation of the  
17:32:18 14 sample and the preparation of the  
17:32:22 15 machine are complex.

17:32:29 16 Q. Are you saying that manual  
17:32:30 17 integration is not a complex technique?

17:32:42 18 A. No, that's not what I meant.  
17:32:51 19 What I meant to say was by comparison  
17:32:55 20 that the visual comparison of  
17:32:59 21 chromatographic profiles is less  
17:33:05 22 complex than the others.

17:33:06 23 Q. Than the others meaning  
17:33:10 24 which techniques?

17:33:11 25 A. The preparation of the IRMS

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17:33:23 2 machine, reading the IRMS data, and the  
17:33:33 3 preparation of samples because it's  
17:33:39 4 long, it takes a day.

17:33:48 5 Q. And do you remember the  
17:33:51 6 actual date at which you were first  
17:33:55 7 allowed to work on an actual sample by  
17:33:57 8 yourself at the end of February?

17:34:04 9 A. No.

17:34:05 10 Q. But at that time, at the  
17:34:10 11 time you were first allowed to work on  
17:34:11 12 a sample is when you were first  
17:34:15 13 validated at the end of February  
17:34:30 14 correct?

17:34:30 15 A. Yes.

17:34:31 16 Q. I'd like to show you what's  
17:34:51 17 LNDD 1069 -- I'm sorry, GDC 1069.

17:35:03 18 MR. SUH: For the panel's  
17:35:04 19 sake the GDC exhibits are the exhibit  
17:35:06 20 number.

17:35:08 21 Q. GDC 1069. Ms. Frelat, do  
17:35:30 22 you recognize GDC 1069 as the log files  
17:35:35 23 from the running of the other samples,  
17:35:39 24 the non-sample 995474 samples that were  
17:35:44 25 run as part of this -- part of this

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17:35:49 2 case?

17:35:51 3 A. Yes, I recognize it.

17:36:14 4 Q. And you recall we talked  
17:36:15 5 about this before, but I would like to  
17:36:19 6 draw your attention to at line 8:45:36  
17:36:24 7 on April 21, 2007.

17:36:43 8 A. Yes.

17:36:43 9 Q. And if you could turn your  
17:36:48 10 -- I'm going to have highlighted the  
17:36:52 11 8:45:36 the C:\MassLynx  
17:36:56 12 Projects\Controle2007.PRO\ DATA\2104  
17:37:02 13 stabilitel.raw. Do you see that?

17:37:05 14 A. Yes.

17:37:06 15 Q. And that is the stability  
17:37:07 16 run that's done as part of a sequence,  
17:37:10 17 correct?

17:37:11 18 A. Yes.

17:37:17 19 Q. And if you go down one, two,  
17:37:19 20 three, four, five, six lines, you see  
17:37:21 21 another entry which has the same file  
17:37:25 22 name?

17:37:29 23 A. Yes.

17:37:31 24 Q. Let me ask you some  
17:37:32 25 questions for the benefit of the panel.

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17:37:34 2 This log file is a listing of all of  
17:37:38 3 the operations that occurred in  
17:37:40 4 connection with the sequence that is  
17:37:42 5 shown here; is that correct?

17:37:44 6 A. Yes.

17:38:01 7 Q. And this feature is  
17:38:03 8 available on the MassLynx software but  
17:38:05 9 not on the OS/2 software, correct?

17:38:22 10 A. It's available on MassLynx  
17:38:25 11 software. I think if it had been  
17:38:33 12 available on OS/2 Mr. Landis'  
17:38:38 13 representative would have asked for it  
17:38:46 14 for the A sample and the B sample.

17:38:48 15 Q. I'd like to turn your  
17:38:51 16 attention also now --

17:38:53 17 MR. SUH: Todd, perhaps you  
17:38:54 18 can highlight six lines down to the  
17:38:57 19 next file.

17:38:58 20 Q. Now for the benefit of the  
17:38:59 21 panel, what occurs when a stability  
17:39:02 22 file or the data related to the  
17:39:05 23 stability 1 raw file is saved with the  
17:39:08 24 same name? What happens to the -- what  
17:39:11 25 happens to the underlying data?

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17:39:37 2 A. I'm going to answer with an  
17:39:39 3 English word. They are overwritten.

17:39:42 4 Q. And when they are  
17:39:46 5 overwritten does that mean that the  
17:39:47 6 data associated with them is lost?

17:39:55 7 A. So the data involved here  
17:40:03 8 you have to know that stability process  
17:40:06 9 takes 10 minutes and you can see the  
17:40:12 10 first time, you can see on the first  
17:40:19 11 line, on the first stability line that  
17:40:23 12 it's 8:45 and 36 seconds and on the  
17:40:32 13 second one that it's 8:48 and 14  
17:40:40 14 seconds. I had explained in my earlier  
17:40:47 15 hearing that on April 21st, 2007 it was  
17:41:06 16 the fifth day of the reanalyses with  
17:41:19 17 witnesses and unfortunately I forgot to  
17:41:29 18 do the centering -- the peak center  
17:41:34 19 before doing the stability at 8:45.

17:41:42 20 Q. And what about the second  
17:41:43 21 one that you had to redo, the last one?

17:41:57 22 A. I forgot to close -- I  
17:42:02 23 forgot to close the RG valve which is  
17:42:07 24 the reference gas valve.

17:42:15 25 Q. And this is what you

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17:42:17 2 remember, this is just your memory of  
17:42:19 3 what occurred, is it?

17:42:27 4 A. Yes.

17:42:27 5 MR. SUH: Let's go down to  
17:42:28 6 the line at 9:40:44, Todd. You're  
17:42:36 7 actually going to have to go to the  
17:42:38 8 next page to do this, to get the rest  
17:42:39 9 of these if you would, go down to line  
17:42:47 10 44 which is the Mix Cal IRMS 01 raw,  
17:42:50 11 and then go always to the next page  
17:42:52 12 which is GDC 1070 and pick up the top  
17:42:58 13 line, Mix Cal IRMS 02 raw, nine lines  
17:43:06 14 down, Mix Cal IRMS 03 raw. Todd, you  
17:43:26 15 might be able to see them now. They're  
17:43:28 16 the longest file names that end in 02  
17:43:30 17 raw, 03 raw, 01 raw, 02 raw, 03 raw.  
17:43:47 18 If you could highlight all of those do  
17:44:11 19 you see that there's a sequence, Mix  
17:44:15 20 Cal IRMS 1, 2, 3, that's the first run  
17:44:19 21 of Mix Cal, after those first three,  
17:44:22 22 there's another run of Mix Cal IRMS  
17:44:24 23 with the file name.

17:44:26 24 Q. When you see that does it  
17:44:27 25 mean the first three were overwritten

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17:44:29 2 and the files and the data associated  
17:44:31 3 with them are gone.

17:45:14 4 A. Yes, the Mix Cal IRMS were  
17:45:17 5 indeed overwritten. But there were no  
17:45:27 6 associated data. There were data  
17:45:36 7 associated but they were empty, there  
17:45:38 8 were no peaks in them because I had put  
17:45:48 9 my vial in the wrong place on the  
17:45:50 10 carousel.

17:45:50 11 Q. And that's just something  
17:45:52 12 you remember doing?

17:45:59 13 A. Yes. Yes, I do remember  
17:46:03 14 that because it was the fifth day of  
17:46:05 15 the retesting and I lost some time out  
17:46:13 16 of my day and my -- I was working very  
17:46:18 17 long days at that time.

17:46:21 18 Q. May I turn your attention  
17:46:23 19 now to your statement.

17:46:29 20 MR. SUH: That would be,  
17:46:30 21 Todd, RD 7.12.

17:46:52 22 Q. Let me know when you've had  
17:46:54 23 a chance to read it.

17:46:56 24 THE INTERPRETER: Which part  
17:46:57 25 are we calling for, I'm sorry? What

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17:47:00 2 was the reference?

17:47:01 3 Q. The section under the IRMS  
17:47:03 4 linearity checks and the second full  
17:47:05 5 paragraph which begins "While preparing  
17:47:07 6 witness statements for the March 2008  
17:47:09 7 hearing."

17:47:21 8 A. Right. I wrote this  
17:47:22 9 paragraph so I know what it says. I  
17:47:24 10 know what I wrote.

17:47:28 11 Q. Ms. Frelat, who -- when I  
17:47:31 12 read the first sentence it says "LNDD  
17:47:33 13 staff found the printed data from the  
17:47:36 14 August 2006 linearity test." Who  
17:47:38 15 actually found the August 2006  
17:47:40 16 linearity test? If you look up on the  
17:47:51 17 screen.

17:48:33 18 A. I went into the archives. I  
17:48:41 19 think I -- I think I was there, I think  
17:48:43 20 it was with Corinne, but I don't really  
17:48:48 21 know.

17:48:55 22 Q. Your testimony is you went  
17:48:57 23 into the archives with Ms. Buisson,  
17:49:02 24 correct?

17:49:03 25 A. I don't -- I don't know



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17:49:07 2 whether it was Ms. Buisson.

17:49:09 3 Q. What was the date that you  
17:49:11 4 went to the archives?

17:49:16 5 A. I don't remember the exact  
17:49:35 6 date.

17:49:35 7 Q. And do you remember why you  
17:49:36 8 went to the archives?

17:50:04 9 A. I think it was to look for  
17:50:09 10 the printouts of the linearity tests.

17:50:13 11 Q. When you say you think it  
17:50:15 12 was to look for the printouts of the  
17:50:18 13 linearity tests, you're not sure that  
17:50:22 14 was the reason, right?

17:50:23 15 A. I think I went there to look  
17:50:41 16 for the other linearity tests, the ones  
17:50:46 17 that were provided in the -- on the CDs  
17:51:00 18 and I came across the box of other  
17:51:03 19 ones.

17:51:04 20 Q. So your testimony is that  
17:51:08 21 when you write "LNDD staff found the  
17:51:11 22 printed data from the August 2006  
17:51:14 23 linearity test," you're referring to  
17:51:17 24 yourself?

17:51:32 25 A. I'm a member of the LNDD

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17:51:38 2 staff, but I don't remember who I went  
17:51:41 3 there with.

17:51:46 4 Q. You found -- when you say  
17:51:50 5 the LNDD staff, you remember yourself  
17:51:54 6 going, you and someone else; is that  
17:51:59 7 correct?

17:51:59 8 A. Yes.

17:52:08 9 Q. And you found the August  
17:52:10 10 2006 linearity test where?

17:52:12 11 A. In an archive box.

17:52:22 12 Q. And you found it in an  
17:52:24 13 archive box separate from the other  
17:52:27 14 linearity tests?

17:52:28 15 A. Yes.

17:52:34 16 Q. And what was the label on  
17:52:37 17 that archive box?

17:52:38 18 A. Well, technical annex,  
17:53:01 19 technical appendix.

17:53:04 20 Q. So --

17:53:05 21 MR. PAULSSON: She's not  
17:53:06 22 done.

17:53:07 23 MR. SUH: Oh, excuse me.

17:53:10 24 A. August 2006, with several  
17:53:18 25 instrument names including IsoPrime 1,

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17:53:25 2 but I don't remember the others.

17:53:26 3 Q. So your testimony was you

17:53:31 4 went to go look for the other linearity

17:53:38 5 tests, correct?

17:53:41 6 A. Yes.

17:53:42 7 Q. And did you find the other

17:53:44 8 linearity tests?

17:53:45 9 A. Yes.

17:53:48 10 Q. And did you find the other

17:53:50 11 linearity tests before you found the

17:53:53 12 August linearity tests?

17:53:58 13 A. I don't remember.

17:54:06 14 Q. And where did you find the

17:54:09 15 other linearity tests, the ones that

17:54:11 16 were produced?

17:54:12 17 A. In the archive boxes.

17:54:21 18 Q. And what was the label on

17:54:23 19 the archive box that contained the

17:54:25 20 other linearity tests, the ones that

17:54:27 21 were produced?

17:54:28 22 A. Technical annex, technical

17:54:38 23 attachment, the month involved in 2006,

17:54:50 24 IsoPrime 1 and the name of other pieces

17:54:53 25 of equipment.

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17:54:55 2 Q. Why would you continue to look  
17:54:59 3 if you thought the August linearity test  
17:55:02 4 wasn't done?

17:55:10 5 A. But I didn't think that the  
17:55:38 6 test had not been done.

17:55:49 7 Q. If you didn't think the test  
17:55:50 8 had been done why hadn't you looked for  
17:55:53 9 the August linearity test prior to the  
17:55:56 10 last hearing?

17:55:57 11 MR. PAULSSON: She didn't  
17:55:59 12 think that the test had not been done.

17:56:03 13 MR. SUH: Oh.

17:56:12 14 Q. If you thought the August  
17:56:13 15 linearity test had in fact been done,  
17:56:20 16 why didn't you look for it before the  
17:56:26 17 last hearing, during the discovery  
17:56:29 18 production?

17:56:30 19 A. During the time when Mr.  
17:57:02 20 Landis' representatives were asking us  
17:57:04 21 for evidence I wasn't involved in  
17:57:11 22 looking for the evidence because I had  
17:57:18 23 to continue with my work on sample  
17:57:23 24 analysis.

17:57:25 25 Q. I'd like to show you -- I'd

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17:57:37 2 like you to read the statement right  
17:57:39 3 here. Did you have any discussions  
17:57:52 4 with anybody about the statement -- I'd  
17:57:57 5 like to draw your attention to this  
17:58:00 6 part of the discovery response right  
17:58:03 7 here.

17:58:03 8 MR. BARNETT: Again, we face  
17:58:05 9 a logistical issue, of A, we're asking  
17:58:07 10 the fact witness to interpret a  
17:58:09 11 document written by the attorneys. B,  
17:58:11 12 she doesn't -- already said she's not  
17:58:15 13 comfortable reading English.

17:58:17 14 Q. I can have the translator --  
17:58:18 15 all I'm going to ask her is if she had  
17:58:20 16 any part in helping her produce the  
17:58:22 17 document?

17:58:32 18 THE PRESIDENT: Which piece  
17:58:33 19 do you want her to read?

17:58:37 20 MR. SUH: This C 9 right  
17:58:39 21 here.

17:58:39 22 THE INTERPRETER: May I  
17:58:40 23 translate?

17:58:41 24 Q. Yes. Did you consult with  
18:00:27 25 anybody or talk to anybody about your

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18:00:30 2 statement here during the -- let me  
18:00:37 3 rephrase the question.

18:00:38 4 When the initial discovery  
18:00:40 5 production was going on with -- in  
18:00:45 6 connection with this case did you talk  
18:00:47 7 to anybody about your assertion here  
18:00:51 8 that you actually did the August  
18:00:54 9 linearity test?

18:01:29 10 A. I was not involved in the  
18:01:31 11 answers given to those requests. No,  
18:01:40 12 they didn't ask me.

18:01:45 13 MR. SUH: No further  
18:01:46 14 questions.

18:01:48 15 THE PRESIDENT: Mr. Young,  
18:01:52 16 may I ask you how long will be your  
18:01:57 17 reexamination, not in precise minutes,  
18:02:02 18 but I mean are we talking about 15  
18:02:04 19 minutes or an hour or an hour and a  
18:02:06 20 half or what?

18:02:08 21 MR. YOUNG: Probably longer  
18:02:09 22 than 15 minutes. Probably closer to a  
18:02:12 23 half hour. A little hard to predict.

18:02:27 24 THE PRESIDENT: We have  
18:02:27 25 decided that we'll stop at this point.

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18:02:29 2 Could you please impress upon the  
18:02:30 3 witness that it's impermissible for her  
18:02:34 4 to talk to any of her team, the lawyers  
18:02:37 5 or anybody else about her evidence  
18:02:39 6 since her questioning isn't finished.  
18:02:42 7 It will be concluded in the morning.

18:03:11 8 THE WITNESS: I agree.

18:03:13 9 THE PRESIDENT: Thank you  
18:03:13 10 very much. We'll adjourn until 9 a.m.  
18:03:16 11 tomorrow.

18:03:16 12 MR. BARNETT: Could we have  
18:03:17 13 guidance from Appellant, there's a  
18:03:21 14 number of witnesses left and I'm  
18:03:22 15 wondering if they have made any further  
18:03:26 16 decisions?

18:03:27 17 MR. SUH: One minute,  
18:03:28 18 please.

18:04:22 19 (Discussion off the record.)

18:04:22 20 MR. SUH: Mr. Chair, I think  
18:04:23 21 giving the timing it's clear we're  
18:04:25 22 going to at least not cross examine  
18:04:31 23 Dr. Buisson. We will not cross examine  
18:04:35 24 by phone Dr. de Ceaurriz. If I hadn't  
18:04:41 25 said that already, I can't recall. I

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18:04:43 2 think we're also not going to cross  
18:04:45 3 examine by phone Ms. Gaillard. And  
18:04:50 4 we'll just keep close track of it  
18:04:52 5 tomorrow. We'll see how we do on that.

18:04:56 6 MR. BARNETT: Just to be  
18:04:57 7 clear that our lists match, that leaves  
18:05:01 8 Brenna, Matthews, Jumeau, Clark,  
18:05:04 9 Shackelton, Petty, Garcia, Ayotte and  
18:05:08 10 Leguy?

18:05:11 11 MR. SUH: For now, yes.

18:05:20 12 THE PRESIDENT: Just so we  
18:05:21 13 know, tomorrow morning that means once  
18:05:23 14 the reexamination is finished we're  
18:05:27 15 going to Dr. Brenna straight away?

18:05:31 16 MR. SUH: Correct.

18:05:32 17 THE PRESIDENT: Thank you  
18:05:33 18 very much.

18:05:34 19 (Time noted: 6:05 p.m.)

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I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify that the foregoing proceedings were taken before me on March 21, 2008;

That the within transcript is  
a true record of said proceedings;

That I am not connected by blood or marriage with any of the parties herein nor interested directly or indirectly in the matter in controversy, nor am I in the employ of the counsel.

IN WITNESS WHEREOF, I have  
hereunto set my hand this \_\_\_\_ day of  
\_\_\_\_\_, 2008.

GAIL F. SCHORR, C.S.R., C.R.R.

## 1 E X H I B I T S

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| 4 | (Frelat Exhibits 1 and 2 for | 837  | 13   |
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IN THE COURT OF ARBITRATION FOR SPORT  
-----X

FLOYD LANDIS,

Appellant,

v.

CAS 2007/A/1394

UNITED STATES ANTI-DOPING AGENCY,

Respondent.

-----X

VOLUME 4

March 22, 2008

9:03 a.m.

BEFORE:

MR. DAVID A.R. WILLIAMS, President

MR. DAVID RIVKIN, Arbitrator

MR. JAN PAULSSON, Arbitrator

REPORTED BY: GAIL F. SCHORR, C.S.R.

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7 Court of Arbitration for Sport

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9

TODD THOMPSON, TFI

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09:02:58 2 P R O C E E D I N G S

09:03:43 3 THE PRESIDENT: Good morning,  
09:03:44 4 everybody. May I just record that Mr.  
09:03:50 5 Matthieu Reeb, the Secretary General of  
09:03:52 6 CAS, is now joining the hearing.

09:03:55 7 MR. REEB: Good morning,  
09:03:56 8 everyone.

09:04:06 9 THE PRESIDENT: Mr. Young, I  
09:04:07 10 think you're due to reexamine. Please  
09:04:09 11 proceed.

09:04:10 12 MR. YOUNG: Thank you, Mr.  
09:04:11 13 Chairman. So that we have a consistent  
09:04:20 14 format, would you mind if we have Todd  
09:04:23 15 bring up a couple of the documents that  
09:04:25 16 he brought up yesterday?

09:04:28 17 MR. SUH: We have no  
09:04:29 18 objection to that.

09:04:30 19 THE PRESIDENT: Thank you  
09:04:31 20 very much.

09:04:32 21 MR. YOUNG: Todd, could you  
09:04:33 22 bring up 1339.

09:04:38 23 MR. THOMPSON: LNDD?

09:04:40 24 MR. YOUNG: LNDD, thank you.  
09:04:46 25 Could we get that document in front of

1

09:04:48 2 Ms. Frelat.

3 D I A N A C L A R K,

4 called as the interpreter in this

5 action, resumed, having been previously

6 affirmed.

7 C L A I R E F R E L A T,

8 resumed, having been previously duly

9 affirmed, was examined and testified

10 through the interpreter further as

11 follows:

12 REDIRECT EXAMINATION

09:05:12 13 BY MR. YOUNG:

09:05:12 14 Q. Ms. Frelat, yesterday when

09:05:14 15 you were asked to look at this document

09:05:17 16 you commented on the small size of the

09:05:20 17 chromatogram. Do I recall that

09:05:22 18 correctly?

09:05:38 19 A. Yes.

09:05:39 20 Q. So if this was not just a

09:05:45 21 demonstration but rather you were

09:05:50 22 sitting in the laboratory at your

09:05:53 23 computer, what would you have done to

09:05:57 24 identify either the internal standard

09:06:03 25 or the 11 keto in this chromatogram?



1 CLAUDE FRELAT - REDIRECT

09:06:28 2 A. In the total ion current  
09:06:41 3 window --

09:06:45 4 Q. Could you point to which  
09:06:47 5 window that is.

09:06:57 6 A. That's this window that you  
09:06:58 7 see.

09:06:58 8 Q. I'm sorry, I missed that.  
09:07:01 9 Okay, thank you.

09:07:06 10 A. It would be on my screen. I  
09:07:18 11 would have been able to double click,  
09:07:22 12 right double click on the peaks I  
09:07:27 13 wanted to look at and I would have been  
09:07:32 14 able to see the retention time and the  
09:07:37 15 mass spectrometry. And as soon as I  
09:07:48 16 identified them and marked them I would  
09:07:54 17 have done a printout of this window  
09:07:57 18 alone.

09:08:00 19 Q. And how would you, if you  
09:08:06 20 would have, used the data below in this  
09:08:18 21 box after you'd done that?

09:08:21 22 A. The data that's below are  
09:08:44 23 shown in a log where I would indicate  
09:08:55 24 the retention times, the relative  
09:08:59 25 retention times, and the relative

1 CLAUDE FRELAT - REDIRECT

09:09:04 2 abundance of ions which in this case  
09:09:11 3 are called M 2 signal and M 3 signal.  
09:09:19 4 So I would have shown -- so I would  
09:09:26 5 have indicated the numbers that appear  
09:09:28 6 in the Q1 ratio column. And then I  
09:09:34 7 would have been able to compare the  
09:09:37 8 retention times and the relative  
09:09:40 9 retention times and the relative  
09:09:43 10 abundances to those which appear on the  
09:09:53 11 report of the Mix Acetate GC/MS.

09:10:04 12 Q. So the Mix Acetate GC/MS is  
09:10:06 13 a control, a standard?

09:10:08 14 A. Yes, it's a control.

09:10:15 15 Q. And that would tell you the  
09:10:17 16 correct retention time for the internal  
09:10:21 17 standard, the 5-alpha androstanol?

09:10:32 18 A. Yes.

09:10:36 19 Q. And then you would be able  
09:10:40 20 to compare that to the data that you  
09:10:45 21 have here once you've been able to blow  
09:10:49 22 up this top chromatogram and get the  
09:10:53 23 retention time data for particular  
09:10:55 24 peaks?

09:10:56 25 A. Yes.

1 CLAIR FRELAT - REDIRECT

09:11:25 2 MR. SUH: Mr. Chair, I'd  
09:11:26 3 object to this line of questioning that  
09:11:28 4 counsel is leading the witness on  
09:11:30 5 redirect and this is improper.

09:11:41 6 THE PRESIDENT: Mr. Young,  
09:11:42 7 it may be best if you try to have the  
09:11:45 8 questions more open-ended. You said  
09:11:47 9 "and then you would be able to compare  
09:11:49 10 that," which suggests the answer,  
09:11:50 11 instead of saying and then would you be  
09:11:58 12 able to. That's I think the protest.  
09:12:00 13 So if you could just remember that as  
09:12:02 14 you proceed.

09:12:04 15 MR. YOUNG: That's perfectly  
09:12:05 16 fine. I was just summarizing what she  
09:12:08 17 already said to make sure I understood  
09:12:09 18 it. But I'd be happy to change the  
09:12:11 19 form.

09:12:18 20 Could we put up Page 1362,  
09:12:22 21 please.

09:12:40 22 Q. Have you got it in your  
09:12:42 23 book, Ms. Frelat?

09:12:44 24 A. Yes.

09:12:49 25 Q. If you were sitting in your

1 CLAIRe FRELAT - REDIRECT

09:12:51 2 laboratory looking at this chromatogram,  
09:13:01 3 would there be any other data associated  
09:13:06 4 with it?

09:13:06 5 A. Yes, there would be the Mix  
09:13:33 6 Cal Acetate. We know that we adjust  
09:13:35 7 the pressure of -- the helium pressure  
09:13:42 8 so that the internal standard comes out  
09:13:48 9 at approximately 870 seconds, and with  
09:13:56 10 Mix Cal Acetate we have the internal  
09:14:02 11 standard time so I can refer to that.

09:14:10 12 Q. Where in these documents is  
09:14:12 13 the Mix Cal Acetate internal reference  
09:14:18 14 standard time that you referred to?

09:14:21 15 A. It's on LNDD Page 1386. On  
09:14:59 16 the written report, the first peak and  
09:15:07 17 the internal standard and it comes out  
09:15:13 18 at 880.6 seconds, 880.6 seconds.

09:15:24 19 Q. Could you point to that so  
09:15:27 20 Todd could highlight it, please, that  
09:15:32 21 880 number.

09:15:38 22 A. Here, the first one.

09:15:58 23 Q. So going back to Page 1362,  
09:16:20 24 if you were sitting in your laboratory,  
09:16:23 25 how would you know which of these peaks

1 CLAIR FRELAT - REDIRECT

09:16:31 2 was the internal standard in this  
09:16:35 3 sample?

09:16:39 4 A. I would look at the printed  
09:16:53 5 report which is on LNDD Page 1363. And  
09:17:07 6 I would look at the time which  
09:17:23 7 corresponds to the same time in the Mix  
09:17:33 8 Cal Acetate. It's really hard to see  
09:17:35 9 this number. I think it's 880.9.

09:18:00 10 Q. And would that be the peak  
09:18:04 11 that corresponds to the Mix Cal  
09:18:07 12 Acetate?

09:18:07 13 A. That's the peak that  
09:18:12 14 corresponds to the internal standard.

09:18:15 15 Q. And if that's the case,  
09:18:18 16 would that peak number 3 be the  
09:18:22 17 internal standard?

09:18:25 18 A. Yes.

09:18:30 19 Q. Let me ask you a question  
09:18:57 20 about manual integration. Mr. Rivkin  
09:19:11 21 asked the question whether there was a  
09:19:14 22 standard operating procedure for manual  
09:19:18 23 integration. And I'd like to show you  
09:19:34 24 a document that is numbered LNDD 0606.

09:19:51 25 MR. RIVKIN: Sorry, in which

1 CLAUDE FRELAT - REDIRECT

09:19:56 2 exhibit number?

09:19:57 3 MR. YOUNG: 112.

09:20:00 4 MR. RIVKIN: Thank you.

09:20:05 5 Q. And is that the document you  
09:20:06 6 were talking about?

09:20:07 7 A. Yes. It's M-DP-31. I'll  
09:20:18 8 show you where it says that. On the  
09:20:25 9 top at the right.

09:20:32 10 Q. When you are manually  
09:20:33 11 integrating a peak, do you follow this  
09:20:39 12 SOP?

09:20:49 13 A. Yes.

09:20:50 14 Q. And again, if we were  
09:20:52 15 sitting in -- if you were sitting in  
09:20:55 16 your laboratory looking at your  
09:20:58 17 computer screen, what would you be  
09:21:13 18 looking at and what tools would you  
09:21:15 19 have in front of you to be able to  
09:21:21 20 manually integrate a peak?

09:21:23 21 A. The first thing that comes  
09:21:40 22 up on my screen is the chromatographic  
09:21:45 23 profile. Next I would bring up the two  
09:21:53 24 for one -- two to one trace. And the  
09:22:02 25 tools that I have at my disposal are

1 CLAIRe FRELAT - REDIRECT

09:22:09 2 the possibility to zoom in on a part of  
09:22:13 3 it, on a part of the trace and to block  
09:22:25 4 out the two traces together. I can  
09:22:35 5 also bring up a little box where the  
09:22:44 6 two for one value appears exactly, and  
09:22:57 7 when you move the cursor along the  
09:22:59 8 baseline the two for one value may  
09:23:09 9 change if there's a peak. It stays  
09:23:18 10 stable if it's actually background  
09:23:21 11 noise.

09:23:25 12 Q. And then what do you do as  
09:23:29 13 you move the cursor along the baseline  
09:23:35 14 and it starts to change?

09:23:49 15 A. At that point I know there  
09:23:52 16 is a peak. And if the software -- and  
09:24:10 17 if the software has indicated  
09:24:13 18 background noise at a place where the  
09:24:15 19 two for one trace increases, I  
09:24:24 20 deactivate it and I indicate a  
09:24:31 21 background noise point there -- and I  
09:24:36 22 indicate a background noise point at  
09:24:42 23 the point where the two for one is  
09:24:46 24 stable. The two for one value is  
09:24:52 25 stable.

1 CLAUDE FRELAT - REDIRECT

09:24:54 2 Q. And how does that relate to  
09:24:57 3 identifying where a peak would start?

09:25:01 4 A. When you're doing a manual  
09:25:16 5 change you start by identifying the  
09:25:20 6 background noise and then to verify the  
09:25:26 7 peak integration, when the peak is of  
09:25:34 8 interest, the two for one trace  
09:25:39 9 increases. I will put the start of the  
09:25:43 10 peak which immediately I will put it at  
09:25:52 11 the point that immediately precedes the  
09:25:58 12 increase in the two for one value.

09:26:01 13 Q. And how do you identify the  
09:26:04 14 end of the peak?

09:26:05 15 A. I move the cursor and I put  
09:26:19 16 the end of the peak at the point where  
09:26:21 17 the two for one value is once again  
09:26:24 18 stable.

09:27:08 19 Q. When you're looking at a  
09:27:12 20 chromatogram, before you do any manual  
09:27:20 21 integration, what do you see?

09:27:39 22 A. There is a printed report  
09:28:02 23 with the retention times and the peaks,  
09:28:15 24 the retention time of the peaks which  
09:28:21 25 are on the chromatogram that I can



1 CLAIRe FRELAT - REDIRECT

09:28:29 2 bring up on my screen and I compare my  
09:28:50 3 peaks to the retention times. I find  
09:28:56 4 the peaks with the retention times.

09:29:00 5 Q. And my question is when you  
09:29:09 6 then choose to manually integrate one  
09:29:15 7 or more peaks on that chromatogram,  
09:29:23 8 does the original data go away forever?

09:29:29 9 A. No, there -- no. The data  
09:29:52 10 are logged, recorded. The data  
09:30:01 11 collected by the software are saved in  
09:30:04 12 the software.

09:30:05 13 MR. SUH: I'd renew my  
09:30:07 14 objection as to leading.

09:30:13 15 THE PRESIDENT: Please  
09:30:14 16 proceed, Mr. Young.

09:30:23 17 Q. And if you wanted to recover  
09:30:29 18 that original data what would you do?

09:30:41 19 A. I would open the DP manual.  
09:31:07 20 I would load -- I would load the data  
09:31:14 21 that had been acquired. I would -- and  
09:31:27 22 I would enter file load.

09:31:32 23 Q. And then what would happen?

09:31:36 24 A. The original data would  
09:31:42 25 reappear on the screen.

1 CLAUDE FRELAT - REDIRECT

09:31:46 2 Q. And would that include the  
09:31:50 3 original delta values for each of the  
09:31:52 4 peaks?

09:32:04 5 A. Yes, if you would click on  
09:32:06 6 view sample the data would appear.

09:32:13 7 Q. You participated in the  
09:32:19 8 reprocessing of the electronic data  
09:32:21 9 files with Dr. Botre?

09:32:31 10 A. Yes.

09:32:36 11 Q. And during that reprocessing  
09:32:47 12 what were the different ways that the  
09:32:52 13 data in the electronic data files were  
09:32:55 14 looked at?

09:32:57 15 A. There was the automatic  
09:33:21 16 process.

09:33:23 17 Q. And let me stop you right  
09:33:25 18 there. Is the automatic process what  
09:33:31 19 you just described?

09:33:36 20 A. Yes.

09:33:38 21 Q. Then what else?

09:33:50 22 A. Manual integration. And  
09:33:55 23 integration without subtraction of  
09:33:58 24 background noise.

09:34:13 25 Q. The automatic reprocessing

1 CLAUDE FRELAT - REDIRECT

09:34:15 2 that you've described, was that done on  
09:34:20 3 the same IsoPrime instrument that was  
09:34:30 4 used to originally create the raw  
09:34:32 5 electronic data?

09:34:34 6 A. The raw data was originally  
09:34:53 7 printed -- prepared from the IsoPrime  
09:34:59 8 1. Were originally printed from the  
09:35:03 9 IsoPrime 1. And afterwards they asked  
09:35:08 10 us to strip out from the raw data with  
09:35:20 11 the other machine, the IsoPrime 2.

09:35:28 12 Q. So the raw data was  
09:35:34 13 reprocessed on the IsoPrime 2 with  
09:35:38 14 MassLynx automatically?

09:35:53 15 A. Yes.

09:35:53 16 Q. But was it also reprocessed  
09:35:59 17 automatically on the IsoPrime 1 as  
09:36:01 18 well?

09:36:03 19 A. Yes.

09:36:07 20 Q. Yesterday Mr. Suh was asking  
09:36:18 21 you questions about your testimony in  
09:36:20 22 the hearing in Malibu.

09:36:31 23 A. Yes.

09:36:32 24 Q. He was asking you questions  
09:36:33 25 about your testimony of 1.5 or 1.6

1 CLAIRe FRELAT - REDIRECT

09:36:41 2 being a significant number. Do you  
09:36:43 3 remember that?

09:36:45 4 A. Yes.

09:37:00 5 Q. Do you use that 1.5 or 1.6  
09:37:03 6 number for any purpose in your  
09:37:05 7 analysis?

09:37:08 8 A. No, not at all. In fact,  
09:37:21 9 when I gave those numbers I was  
09:37:29 10 thinking, I was thinking as a -- yes, I  
09:37:42 11 was thinking --

09:37:44 12 THE INTERPRETER: Excuse me,  
09:37:45 13 I'd like to look this up.

09:37:48 14 MR. PAULSSON: I was  
09:37:49 15 imagining that I was in the process of  
09:37:51 16 conducting an analysis of the B sample.

09:37:54 17 THE INTERPRETER: Thank you.

09:37:54 18 A. I was imagining myself in  
09:37:57 19 the process of examining a B sample.  
09:38:08 20 And if I saw that the isotopic values  
09:38:25 21 -- when I'm analyzing a B sample I  
09:38:30 22 don't have the A sample values in front  
09:38:32 23 of me. But at the end of the analysis,  
09:38:38 24 at the end of the test when the results  
09:38:39 25 come out, if I see that there are

1 CLAIRe FRELAT - REDIRECT

09:38:48 2 differences, if there is a difference  
09:38:49 3 in the isotopic values, then I think  
09:38:56 4 something must have happened. That was  
09:39:03 5 my 1.5, 1.6 answer.

09:39:17 6 MR. YOUNG: Could we pull up  
09:39:20 7 Page LNDD 2005. It's in Exhibit 142.

09:39:52 8 Q. Ms. Frelat, you were asked  
09:39:53 9 about this form yesterday. There are  
09:40:07 10 three separate entries on the form, 5,  
09:40:09 11 6 and 7; is that correct?

09:40:19 12 A. Yes.

09:40:24 13 Q. You said something yesterday  
09:40:29 14 about the form being filled out in  
09:40:32 15 January of 2006. Is that the whole  
09:40:39 16 form, or part of the form, or what?

09:40:44 17 A. It started being filled out  
09:41:05 18 in January 2006. Then it was filled  
09:41:13 19 out in April 2006.

09:42:13 20 MR. YOUNG: Could we pull up  
09:42:15 21 USADA Page 351, please.

09:42:25 22 MS. SLOAN: That's Exhibit  
09:42:26 23 25.

09:42:26 24 MR. YOUNG: Yes, it is,  
09:42:28 25 thank you.

1 CLAIRe FRELAT - REDIRECT

09:42:56 2 Q. Is this a form that you  
09:42:58 3 filled out for Mr. Landis' B sample?

09:43:10 4 A. Yes. This is the log of the  
09:43:25 5 data of the results that we used to  
09:43:28 6 show the results of the B sample. My  
09:43:37 7 operator code appears here.

09:43:39 8 Q. And are you required to fill  
09:43:41 9 this form out?

09:43:44 10 A. Yes.

09:43:46 11 Q. And in filling out this form  
09:43:55 12 what does the form require you to  
09:43:57 13 compare, if anything?

09:43:59 14 A. We compare the retention  
09:44:17 15 time of the peaks in the blank urine  
09:44:21 16 and in the sample. On here you see the  
09:44:31 17 blank urine F1 and here you see the  
09:44:33 18 sample F1, blank urine F2, sample F2,  
09:44:45 19 blank urine F3 and the sample F3. The  
09:44:52 20 retention times are marked on the lines  
09:44:59 21 entitled TR second. And the line  
09:45:15 22 immediately below that is the  
09:45:19 23 calculation of the relative retention  
09:45:25 24 time of the analytes under  
09:45:28 25 consideration.

1 CLAIR FRELAT - REDIRECT

09:45:35 2 MR. YOUNG: Thank you, I  
09:45:37 3 have no further questions.

09:45:57 4 MR. RIVKIN: Ms. Frelat, I  
09:46:00 5 have a couple of questions for you.  
09:46:06 6 Thank you for your long testimony.  
09:46:16 7 When you performed the analysis on the  
09:46:23 8 B sample, Dr. De Boer was with you the  
09:46:33 9 entire time; is that right?

09:46:36 10 THE WITNESS: Yes. Yes, he  
09:46:46 11 had asked me only to work on the sample  
09:46:49 12 when he was there.

09:46:52 13 MR. RIVKIN: And did he  
09:46:53 14 watch you take each step in the  
09:46:57 15 analysis including any manual  
09:47:00 16 integration that you did?

09:47:02 17 THE WITNESS: In order to  
09:47:30 18 get the results I asked Mr. De Boer if  
09:47:37 19 he wanted to be present for the manual  
09:47:40 20 integration. He said he didn't need to  
09:47:49 21 see how that was done. So he agreed  
09:47:58 22 that I could do the manual integration  
09:48:03 23 while he was asking Mr. de Ceaurriz  
09:48:07 24 some questions in his office.

09:48:13 25 MR. RIVKIN: Did he ask you

1 CLAIRe FRELAT - REDIRECT

09:48:14 2 any questions about the data and how it  
09:48:17 3 was analyzed once you presented him  
09:48:20 4 with the results?

09:48:24 5 THE WITNESS: He asked for  
09:48:43 6 the GC/MS spectors of the analytes, but  
09:49:09 7 nothing about the IRMS integration.

09:49:16 8 THE INTERPRETER: We just  
09:49:20 9 agreed that two terms can be used for  
09:49:22 10 the meaning of the word integration.

09:49:30 11 MR. RIVKIN: Did he express  
09:49:31 12 any concern about the amount of time  
09:49:32 13 that elapsed to conclude the process as  
09:49:39 14 you describe in your witness statement?

09:49:59 15 THE WITNESS: I don't think  
09:50:00 16 so.

09:50:01 17 MR. RIVKIN: Did he raise  
09:50:02 18 any questions about whether you had  
09:50:04 19 properly identified which peak was  
09:50:06 20 related to which metabolite?

09:50:11 21 THE WITNESS: No.

09:50:26 22 MR. RIVKIN: When you  
09:50:28 23 presented him with the results of the  
09:50:32 24 analysis that showed that the sample  
09:50:34 25 was positive in your view, did he make



1 CLAIRe FRELAT - REDIRECT

09:50:37 2 any comment about that? Did he ask you  
09:50:40 3 to rerun any numbers?

09:50:45 4 THE WITNESS: No.

09:51:00 5 MR. RIVKIN: Thank you.

09:51:03 6 MR. PAULSSON: Now that Mr.  
09:51:06 7 Rivkin without the slightest apology  
09:51:08 8 has stolen my question I have to think  
09:51:10 9 of something else to satisfy my  
09:51:13 10 curiosity.

09:51:14 11 As a matter of curiosity, in  
09:51:18 12 your witness statement you have a  
09:51:20 13 section which is entitled "Confirmation  
09:51:23 14 by the B sample." That's the title.  
09:51:35 15 So this might be a question about the  
09:51:37 16 words that you use. In working on the  
09:51:48 17 B sample you were confirming a  
09:51:50 18 positive, were you?

09:51:55 19 THE WITNESS: Yes.

09:51:58 20 MR. PAULSSON: And what was  
09:51:59 21 that positive?

09:52:01 22 THE WITNESS: It was Mr.  
09:52:13 23 Landis' sample 995474.

09:52:21 24 MR. PAULSSON: But you were  
09:52:23 25 working on B?

1 CLAIR FRELAT - REDIRECT

09:52:25 2 THE WITNESS: Yes.

09:52:29 3 MR. PAULSSON: And it was  
09:52:30 4 confirming a positive?

09:52:33 5 THE WITNESS: It was to  
09:52:37 6 confirm the first analysis which had  
09:52:40 7 given a positive result.

09:52:41 8 MR. PAULSSON: So you were  
09:52:42 9 confirming A? The work on the B sample  
09:52:48 10 confirmed the results of the A sample?

09:52:50 11 THE WITNESS: Yes.

09:52:54 12 MR. PAULSSON: Now, just  
09:52:57 13 above that you have a section on the A  
09:53:00 14 sample which is very short because you  
09:53:04 15 had nothing to do with it, you were on  
09:53:06 16 vacation. But that also you call  
09:53:12 17 confirmation. What was the A sample  
09:53:17 18 confirming, as a matter of  
09:53:27 19 nomenclature?

09:53:28 20 THE WITNESS: In fact, in  
09:53:33 21 the lab when there is a suspicion we  
09:53:41 22 say that we are confirming, we call  
09:53:54 23 that a second examination or a  
09:53:57 24 confirmation.

09:53:58 25 MR. PAULSSON: So when you

1 CLAIR FRELAT - REDIRECT

09:53:59 2 would be working on any A sample, first  
09:54:02 3 there would be a suspicion and then  
09:54:04 4 later on there would be a confirmation  
09:54:06 5 of that suspicion?

09:54:07 6 THE WITNESS: Yes.

09:54:20 7 MR. PAULSSON: How is the  
09:54:21 8 suspicion established?

09:54:23 9 THE WITNESS: The sample  
09:54:34 10 undergoes screening and the anabolizing  
09:54:45 11 screening, there is a report that's  
09:54:47 12 studied. There is a ratio that is  
09:54:52 13 studied which is the testosterone on  
09:54:57 14 epitestosterone ratio and if the  
09:55:04 15 screening comes out above 4 we confirm  
09:55:13 16 it with the IRMS.

09:55:16 17 MR. PAULSSON: Thank you.

09:55:16 18 Now back to your statement  
09:55:19 19 as to the confirmation effectuated on  
09:55:25 20 sample B. And you have a significant  
09:55:37 21 explanation of the various steps taken  
09:55:39 22 in that section, but what I didn't see  
09:55:49 23 clearly reading your statement was when  
09:55:56 24 the result, i.e., the confirmation,  
09:56:10 25 becomes definitive, when it is

1 CLAIR FRELAT - REDIRECT

09:56:22 2 constatee.

09:56:29 3 THE WITNESS: It's final  
09:56:33 4 when we finish the recording EFCR 06.  
09:56:49 5 And when we have been able to see the  
09:56:51 6 delta/delta. This can be found in --  
09:57:02 7 in the basic pack, Exhibit 25, Page  
09:57:09 8 USADA 0351 and 0352.

09:57:16 9 MR. PAULSSON: On the screen  
09:57:18 10 now. Can you confirm?

09:57:21 11 THE WITNESS: Yes.

09:57:26 12 MR. PAULSSON: And when you  
09:57:28 13 say we, "on" in French, is that you?

09:57:37 14 THE WITNESS: Yes.

09:57:39 15 MR. PAULSSON: Structurally  
09:57:40 16 in the laboratory is it correct that  
09:57:42 17 you report to Ms. Mongongu?

09:57:51 18 THE WITNESS: Yes. I also  
09:58:02 19 fill out reports to show that I have  
09:58:04 20 prepared the machines correctly. She  
09:58:09 21 verifies, she confirms the logs and she  
09:58:21 22 confirms that the records that I have  
09:58:24 23 filled out have been correctly filled  
09:58:26 24 out and that there are no problems.

09:58:33 25 MR. PAULSSON: Maybe there's

1 CLAIR FRELAT - REDIRECT

09:58:34 2 a problem with translation.

09:58:36 3 MS. HATTON: The control is  
09:58:38 4 quality control chart.

09:58:43 5 THE WITNESS: She checks  
09:58:43 6 that I have filled out the quality  
09:58:45 7 control charts correctly and that there  
09:58:49 8 are no problems.

09:58:54 9 MR. PAULSSON: Does that  
09:58:55 10 mean that the confirmation of the  
09:58:57 11 positive does not end with you, it also  
09:59:01 12 has to be approved at her level?

09:59:19 13 THE WITNESS: Yes.

09:59:20 14 MR. PAULSSON: Has it ever  
09:59:21 15 happened that, as far as you were  
09:59:23 16 concerned, there was one particular  
09:59:25 17 outcome but it was not approved?

09:59:43 18 THE WITNESS: No. Whether  
09:59:48 19 it was Cynthia Mongongu who is the  
09:59:51 20 person who checks my results, or  
09:59:54 21 Corinne Buisson, I have always been  
09:59:56 22 approved in my conclusions.

10:00:00 23 MR. PAULSSON: Does your  
10:00:01 24 controller, does your controller have  
10:00:06 25 to be controlled by anybody or is that

1 CLAIRe FRELAT - REDIRECT

10:00:07 2 the final word of the laboratory?

10:00:26 3 THE WITNESS: The director

10:00:27 4 also verifies the files.

10:00:29 5 MR. PAULSSON: In each case

10:00:31 6 as you understand?

10:00:32 7 THE WITNESS: Yes. Yes, he

10:00:35 8 signs the analysis reports.

10:00:38 9 MR. PAULSSON: So that is

10:00:39 10 the confirmation of a positive of the

10:00:42 11 laboratory as such?

10:00:46 12 THE WITNESS: Yes.

10:00:51 13 MR. PAULSSON: Thank you.

10:00:54 14 THE PRESIDENT: I wanted to

10:01:03 15 ask you about the discovery of the

10:01:06 16 August 2006 linearity test which you

10:01:10 17 mentioned in your evidence. Did you

10:01:30 18 come to learn of the AAA panel's

10:01:35 19 decision in this case?

10:01:38 20 THE WITNESS: It was sent to

10:01:48 21 me. I looked at it quickly.

10:01:58 22 THE PRESIDENT: Was it in

10:01:58 23 the original English or was it a French

10:02:01 24 translation?

10:02:02 25 THE WITNESS: It was in

1 CLAIR FRELAT - REDIRECT

10:02:07 2 English.

10:02:08 3 THE PRESIDENT: And were you  
10:02:12 4 able to follow it and read it without  
10:02:16 5 difficulty?

10:02:20 6 THE WITNESS: There were  
10:02:23 7 things in it that I didn't really  
10:02:25 8 understand.

10:02:27 9 THE PRESIDENT: Well, do you  
10:02:29 10 recall that the decision made reference  
10:02:32 11 to the absence of monthly linearity  
10:02:42 12 tests, in particular relating to the  
10:02:45 13 August test for 2006?

10:02:52 14 THE WITNESS: No.

10:03:10 15 THE PRESIDENT: I was  
10:03:11 16 interested in the questions which Mr.  
10:03:13 17 Suh put to you yesterday about the  
10:03:15 18 language that appears in your statement  
10:03:20 19 where you say that, "While preparing  
10:03:24 20 witness statements for the March 2008  
10:03:27 21 hearing LNDD staff found the printed  
10:03:30 22 data from the August 2006 linearity  
10:03:33 23 test." Was there any reason why you  
10:04:16 24 didn't simply state that I found the  
10:04:19 25 August 2006 when looking in the archive

1 CLAIR FRELAT - RECRSS

10:04:34 2 boxes with another member of the staff?

10:04:38 3 THE WITNESS: It was shorter

10:05:02 4 to write it.

10:05:07 5 THE PRESIDENT: Are you

10:05:08 6 satisfied that what was discovered was

10:05:10 7 the original, unaltered August 2006

10:05:16 8 linearity test?

10:05:35 9 THE WITNESS: Yes.

10:05:37 10 THE PRESIDENT: Yes, thank

10:05:39 11 you very much. I'll ask counsel

10:05:41 12 whether any further questions are

10:05:43 13 requested?

10:05:44 14 MR. SUH: Yes, very briefly.

10:05:46 15 RECRSS EXAMINATION

10:05:49 16 BY MR. SUH:

10:05:49 17 Q. I would like to show the

10:05:50 18 witness USADA 369 which is in Exhibit

10:05:55 19 25. It's the second page, for the

10:06:03 20 record, of Dr. De Boer's report on the

10:06:07 21 B sample analysis. Have you seen this

10:06:16 22 document before? It's part of the doc

10:06:18 23 pack?

10:06:23 24 A. Yes.

10:06:23 25 Q. And turning your attention



1 CLAUDE FRELAT - RECROSS

10:06:25 2 to paragraph A, do you agree with  
10:06:32 3 Dr. De Boer's conclusion that he was  
10:06:34 4 not able to see the documentation and  
10:06:36 5 data regarding the uncertainty of the  
10:06:40 6 IRMS analysis which was reported to be  
10:06:43 7 .8?

10:07:19 8 MR. PAULSSON: Mr. Suh, I  
10:07:20 9 hate to be pedantic, but it doesn't say  
10:07:22 10 I was unable. It says it was not  
10:07:25 11 possible. It may be the way he writes  
10:07:28 12 it, but...

10:07:31 13 MR. SUH: I was asking the  
10:07:32 14 witness -- I see.

10:07:39 15 Q. If you turn -- let me ask  
10:07:41 16 you was the expert able to see the  
10:07:45 17 documentation and data regarding the .8  
10:07:50 18 per mil measure of uncertainty?

10:08:01 19 A. He asked to see them, the  
10:08:21 20 director said he didn't -- that he  
10:08:27 21 could not see them. These questions  
10:08:33 22 were addressed to my director, not to  
10:08:35 23 me.

10:08:37 24 Q. And secondly, if you know,  
10:08:39 25 if you know, do you know whether or not

1 CLAUDE FRELAT - RECROSS

10:08:40 2 he was able to see the documentation  
10:08:42 3 data regarding the historical data of  
10:08:47 4 blank urine pool number 4?

10:08:50 5 A. Well obviously he wasn't  
10:09:15 6 able to.

10:09:16 7 Q. And when he stopped  
10:09:21 8 watching, when Dr. De Boer stopped  
10:09:23 9 watching the B sample analysis was it  
10:09:26 10 for the purpose of him to go meet with  
10:09:29 11 your director to discuss these  
10:09:31 12 deficiencies?

10:09:33 13 A. I don't know if it was for  
10:10:02 14 that purpose. All I know is he went to  
10:10:05 15 see my director.

10:10:11 16 MR. PAULSSON: There might  
10:10:13 17 be an ambiguity and I want to explore  
10:10:16 18 it. When you said "Il ne les verrait  
10:10:30 19 pas" -- when you said -- did you  
10:10:34 20 understand that to mean that it was a  
10:10:36 21 point of principle in the sense that  
10:10:48 22 there's no question, it's out of the  
10:10:50 23 question that he's going to see them,  
10:10:52 24 or was it a prediction he will not see  
10:10:55 25 them? The sense of what you said I'm

1 CLAUDE FRELAT - RECROSS

10:11:12 2 trying to understand.

10:11:16 3 THE WITNESS: All I can tell  
10:11:28 4 you is it's written down that he didn't  
10:11:29 5 see them, but I wasn't in the room when  
10:11:31 6 this took place.

10:11:33 7 MR. PAULSSON: If somebody  
10:11:34 8 says to me, in French, you won't see  
10:11:37 9 them, it could be a point of principle,  
10:11:41 10 it's out of the question that you're  
10:11:43 11 going to see them or it could be saying  
10:11:45 12 I don't think you will see them.

10:11:54 13 THE WITNESS: All I know is  
10:12:01 14 that it wasn't possible for him to see  
10:12:03 15 them, but I wasn't there when -- I  
10:12:06 16 wasn't in the room when he asked the  
10:12:07 17 question.

10:12:08 18 MR. PAULSSON: Was the  
10:12:08 19 statement reported to you?

10:12:11 20 THE WITNESS: The words as  
10:12:18 21 they were spoken? No, I've only seen  
10:12:25 22 this here.

10:12:29 23 MR. PAULSSON: I thought you  
10:12:31 24 said that the director said these  
10:12:33 25 words.

1 CLAIRe FRELAT - REcross

10:12:40 2 THE WITNESS: No. The

10:12:53 3 questions from Mr. De Boer were

10:12:56 4 addressed to my director. I think my

10:13:01 5 director answered him. That's all.

10:13:03 6 MR. PAULSSON: So it's your

10:13:05 7 inference?

10:13:13 8 THE WITNESS: Yes, it was a

10:13:15 9 deduction I made.

10:13:18 10 THE PRESIDENT: Please

10:13:20 11 continue.

10:13:21 12 MR. SUH: No further

10:13:24 13 questions.

10:13:24 14 THE PRESIDENT: Mr. Young?

10:13:27 15 MR. YOUNG: No questions.

10:13:28 16 THE PRESIDENT: Thank you

10:13:29 17 very much, you're free to leave the

10:13:30 18 witness stand now. I'd like to take a

10:13:50 19 five minute break because the papers

10:13:51 20 behind us are about to fall on the

10:13:54 21 floor and create even more of a mess.

10:13:58 22 So can we take five minutes to get

10:14:00 23 ourselves together.

10:14:04 24 MR. SUH: At some point this

10:14:05 25 morning we'd like to raise a scheduling

1 CLAIRe FRELAT - REcross

10:14:08 2 issue.

10:14:09 3 THE PRESIDENT: Right.

10:14:09 4 Would you like to do it now? Go ahead,

10:14:12 5 we'll hear you and then we'll have a

10:14:15 6 five minute recess.

10:14:16 7 MR. SUH: The issue is as

10:14:18 8 follows: We were looking at our time

10:14:20 9 allocation and the way it's

10:14:22 10 unfortunately broken out due to the

10:14:24 11 time with the translator, is that

10:14:28 12 excluding the time, the few minutes we

10:14:30 13 just spent right now, it appears that

10:14:32 14 we will have something less than four

10:14:35 15 hours for the balance of, well,

10:14:37 16 everything, including closing, and that

10:14:40 17 it does not make any sense to us since

10:14:43 18 if we run out of time for cross there

10:14:46 19 won't be any time for redirect either,

10:14:49 20 for us to continue. So we assume we

10:14:54 21 reserve an hour and a half for closing,

10:14:56 22 we would be left with, well, about two

10:15:02 23 hours, two hours and -- two and a half

10:15:06 24 hours for the balance of the hearing.

10:15:08 25 And we faced this issue last time in

1 CLAUDE FRELAT - RECROSS

10:15:10 2 part due to the number of the USADA  
10:15:13 3 witnesses relative to the number of  
10:15:16 4 Appellant's witnesses, and last time  
10:15:21 5 Appellee allocated some of their time  
10:15:25 6 for us to conduct cross examination.  
10:15:27 7 Given that we're at the morning time  
10:15:30 8 now on Saturday, it appears that if we  
10:15:35 9 were to proceed a few extra hours in  
10:15:38 10 our allocation then we would be able to  
10:15:42 11 balance out the rest of the witnesses.  
10:15:45 12 And this is also accounting for cutting  
10:15:47 13 out witnesses. I believe that even on  
10:15:51 14 this schedule we would have to cut out  
10:15:52 15 the cross of the testosterone experts.  
10:15:57 16 We simply don't have time, even if we  
10:15:59 17 had a few more hours, at the rate we're  
10:16:01 18 going.

10:16:01 19 So I would ask the panel to  
10:16:03 20 consider that. I also I guess at this  
10:16:05 21 time put the same request to USADA and  
10:16:09 22 if the panel wants to think on it or  
10:16:13 23 have further discussions about it,  
10:16:15 24 that's -- we just wanted to let the  
10:16:17 25 panel know that this is the issue that

1 CLAIRe FRELAT - REcross

10:16:18 2 we're facing right now.

10:16:20 3 THE PRESIDENT: So could you  
10:16:21 4 just sum up the precise request you  
10:16:23 5 make.

10:16:24 6 MR. SUH: I think the precise  
10:16:25 7 request would be that we receive an  
10:16:27 8 additional allocation of time, an  
10:16:33 9 allocation somewhere in the range of  
10:16:35 10 about --

10:16:39 11 THE PRESIDENT: Well, what I  
10:16:40 12 suggest is that you might discuss that  
10:16:42 13 with Mr. Young during the break and  
10:16:45 14 we'll also think about it.

10:16:48 15 MR. BARNETT: Could I just  
10:16:49 16 clarify a point as to the record below.  
10:16:51 17 It wasn't that the panel decided to  
10:16:53 18 allocate time. It was that given the  
10:16:55 19 circumstances at that time and there  
10:16:57 20 had been some different issues with the  
10:17:00 21 translator, including having to fire an  
10:17:03 22 interpreter midterm, we granted hours.  
10:17:07 23 So Mr. Suh and I had a very direct  
10:17:11 24 conversation 10 days before this  
10:17:13 25 hearing where I specifically indicated,

1 CLAIRe FRELAT - REcross

10:17:14 2 we've seen the time direction from the  
10:17:16 3 panel, we've seen the witness list, is  
10:17:18 4 there anyone you can narrow given that  
10:17:20 5 we're rearranging witnesses's lives to  
10:17:24 6 get them here. I specifically  
10:17:25 7 referenced the fact that we know  
10:17:26 8 translation takes longer and the  
10:17:28 9 response was, we think we'll get  
10:17:30 10 through all of our witnesses.

10:17:31 11 So just a little more  
10:17:32 12 context for the conversation that  
10:17:34 13 brings us here today.

10:17:39 14 THE PRESIDENT: As Mr.  
10:17:40 15 Paulsson says, that was then and now is  
10:17:42 16 now. We'll stop for five minutes.

10:17:45 17 (A recess was taken.)

10:36:43 18 THE PRESIDENT: Mr. Suh.

10:36:54 19 MR. SUH: Mr. Chair, two  
10:36:55 20 issues. One is I think we have resolved  
10:36:58 21 by mutual agreement with USADA the  
10:37:00 22 allocation of time and that we've looked  
10:37:04 23 at the schedule and the remaining number  
10:37:06 24 of hours and we have divided up the  
10:37:11 25 remaining hours in a proportion I think



1 CLAUDE FRELAT - RECROSS

10:37:14 2 that satisfies both parties. Again, as  
10:37:17 3 this rolls on I know it's a dynamic  
10:37:20 4 thing, but I think for now we should be  
10:37:23 5 fine.

10:37:23 6 MR. BARNETT: If I can just  
10:37:24 7 clarify. First it's a proposal to the  
10:37:27 8 panel because it really impedes upon  
10:37:28 9 the panel's time. What's happened is  
10:37:30 10 because the panel's been good enough to  
10:37:32 11 go late each night there are actually  
10:37:34 12 more hours left in the days that we  
10:37:36 13 have left than originally planned. So  
10:37:39 14 the agreement was that we would propose  
10:37:41 15 that two hours be added to their time  
10:37:44 16 from the running time that Carmen is  
10:37:47 17 keeping and that one hour be added to  
10:37:49 18 our time just in case. So it wouldn't  
10:37:52 19 be subtracted from our time. Our  
10:37:55 20 understanding of the hours left is that  
10:37:57 21 that still allows us to finish before  
10:37:59 22 five on Monday.

10:38:07 23 MR. RIVKIN: I'm just doing  
10:38:09 24 some mental calculations about how much  
10:38:10 25 time is left.

1 CLAUDE FRELAT - RECROSS

10:38:11 2 MR. BARNETT: We noticed  
10:38:12 3 your fingers.

10:38:14 4 MR. RIVKIN: I know that we  
10:38:15 5 have a firm cutoff on Monday in terms  
10:38:19 6 of time.

10:38:24 7 MR. BARNETT: And at least  
10:38:26 8 for USADA we're happy for someone to  
10:38:28 9 take the time and map out the days to  
10:38:31 10 make sure that works, but I think  
10:38:32 11 there's enough of a cushion. We  
10:38:35 12 started the day --

10:38:36 13 MR. RIVKIN: I thought about  
10:38:38 14 18 hours had been used which left about  
10:38:41 15 10 hours.

10:38:42 16 MR. BARNETT: Our notes were  
10:38:43 17 at the start of the day Landis had 3  
10:38:46 18 hours and 21 minutes and we have 6  
10:38:51 19 hours and 36 minutes. So what we're  
10:38:51 20 essentially doing is instead of each  
10:38:53 21 party having 14 hours, they would have  
10:38:54 22 16 hours in total and we would have 15  
10:38:56 23 hours in total. I think that still  
10:38:58 24 works.

10:39:08 25 THE PRESIDENT: I think the

1 CLAUDE FRELAT - RECROSS

10:39:09 2 numbers are far beyond our competence,  
10:39:11 3 so we'll leave it to Carmen to check  
10:39:14 4 your numbers and we'll come back to  
10:39:16 5 you.

10:39:16 6 MR. SUH: The second issue  
10:39:17 7 is very minor. The translator asked us  
10:39:20 8 whether or not we would need her for  
10:39:21 9 the balance of the day. Obviously we  
10:39:23 10 don't have any more French speaking  
10:39:25 11 witnesses, but we do need the  
10:39:27 12 interpretation of a French document.  
10:39:29 13 It is not the entirety of the document,  
10:39:30 14 it is actually basically two paragraphs  
10:39:32 15 of it. If we could have the indulgence  
10:39:36 16 of Mr. Paulsson to read whatever  
10:39:39 17 portions are necessary, I think we  
10:39:41 18 could let the interpreter go.

10:39:47 19 THE PRESIDENT: Yes, that's  
10:39:48 20 perfectly satisfactory.

10:39:51 21 MR. SUH: And we'll make  
10:39:52 22 arrangements for Monday with her.

10:39:55 23 THE PRESIDENT: Mr. Young,  
10:39:56 24 are you content to let Mr. Paulsson  
10:39:58 25 assume the role of translator?

1 CLAUDE FRELAT - RECROSS

10:40:01 2 MR. YOUNG: That's fine.

10:40:03 3 Any combination of Mr. Reeb, Mr.

10:40:05 4 Paulsson and Carmen would be perfectly  
10:40:07 5 fine with us.

10:40:14 6 There's a third matter. We  
10:40:16 7 understand that they are not going to  
10:40:17 8 call or want to examine either Dr.  
10:40:27 9 Shackleton Shackleton or Dr. Clark; is  
10:40:28 10 that correct?

10:40:29 11 MR. SUH: That's correct.

10:40:30 12 MR. YOUNG: These gentlemen  
10:40:32 13 have given up their Easter weekend to  
10:40:34 14 be here. We're going to send them  
10:40:37 15 home, but if there are any questions  
10:40:41 16 that the panel would like to ask them,  
10:40:43 17 I would want to make sure that the  
10:40:46 18 panel has that opportunity before we  
10:40:49 19 put them on planes back to their  
10:40:50 20 families.

10:41:00 21 THE PRESIDENT: Would it be  
10:41:01 22 too much of a burden to ask them to  
10:41:04 23 just wait until after lunch?

10:41:06 24 MR. YOUNG: Absolutely, that  
10:41:07 25 will be fine.

1 CLAIRe FRELAT - REcross

10:41:08 2 THE PRESIDENT: We'll check  
10:41:09 3 it out over lunch.

10:41:11 4 MR. YOUNG: Okay.

10:41:22 5 THE PRESIDENT: We do have a  
10:41:23 6 request to make and I'll ask Mr.  
10:41:25 7 Paulsson if he would explain it. I'm  
10:41:31 8 sorry, Mr. Rivkin.

10:41:33 9 MR. RIVKIN: It's a panel  
10:41:35 10 request.

10:41:35 11 MR. PAULSSON: It comes from  
10:41:36 12 all of us.

10:41:36 13 MR. RIVKIN: This would be  
10:41:37 14 on our time, not on anybody's time, but  
10:41:40 15 all of us realize that we had a  
10:41:42 16 question or two that we would have  
10:41:43 17 liked to have asked Dr. Davis after his  
10:41:46 18 demonstration and didn't. Since we see  
10:41:49 19 him back today, if you could indulge us  
10:41:52 20 to give us a few minutes. We don't  
10:41:54 21 need to turn on the machine for him to  
10:41:56 22 answer the questions, but we would  
10:41:57 23 appreciate a few extra minutes with  
10:41:59 24 Dr. Davis.

10:42:01 25 MR. SUH: Would you like to

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10:42:02 2 do that now?

10:42:03 3 MR. RIVKIN: I think it

10:42:04 4 might be better before we get into

10:42:06 5 USADA's experts.

10:42:06 6 S I M O N D A V I S,

10:42:06 7 resumed, having been previously duly

10:42:06 8 affirmed, was examined and testified

10:42:40 9 further as follows:

10:42:40 10 THE PRESIDENT: Dr. Davis,

10:42:41 11 we're greatly obliged at your

10:42:43 12 willingness to help us for a short

10:42:46 13 time. Just as a formality, would you

10:42:50 14 just confirm that you will adopt the

10:42:53 15 same approach, the same declaration

10:42:56 16 that you made the other day about

10:42:57 17 telling the truth continues to apply.

10:43:00 18 THE WITNESS: I do.

10:43:01 19 THE PRESIDENT: Thank you

10:43:02 20 very much. Mr. Rivkin will ask you

10:43:05 21 some questions.

10:43:06 22 MR. RIVKIN: Dr. Davis, we

10:43:07 23 were all trying to think over the

10:43:09 24 import of your testimony, which was

10:43:11 25 very helpful, and the demonstration you

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10:43:13 2 gave which was also very helpful, and  
10:43:15 3 we understood your testimony about the  
10:43:17 4 potentially distorting effects of the  
10:43:21 5 manual integration.

10:43:24 6 But what occurred to us all,  
10:43:27 7 and on which we'd like to hear your  
10:43:31 8 views so that we can understand it is,  
10:43:36 9 given the fact that the underlying data  
10:43:40 10 was saved and was reanalyzed by the  
10:43:47 11 panel's expert and you were there for  
10:43:51 12 that reanalysis, and then the question  
10:43:57 13 comes to -- and that reanalysis also  
10:44:01 14 showed positive results, how should we  
10:44:07 15 -- how much weight should we give to  
10:44:10 16 that potentially distorting effect  
10:44:13 17 because presumably the independent  
10:44:16 18 expert ran the numbers the way he felt  
10:44:18 19 comfortable and came to results using  
10:44:21 20 the same data that was positive? So if  
10:44:28 21 when the lab was doing its own analysis  
10:44:31 22 and the results were somehow distorted,  
10:44:34 23 does it matter given what Dr. Botre did  
10:44:37 24 in the reprocessing?

10:44:40 25 THE WITNESS: I think we

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10:44:40 2 have what you have to understand is  
10:44:43 3 first of all the chromatography was too  
10:44:46 4 poor to do any real meaningful  
10:44:48 5 integration. The algorithms used  
10:44:50 6 within the software initially rejected  
10:44:53 7 -- sorry, I'll start again.

10:44:55 8 MR. RIVKIN: Which time  
10:44:57 9 period are you talking about? The  
10:45:01 10 initial analysis or reprocessing?

10:45:03 11 THE WITNESS: When the data  
10:45:04 12 was initially required then two files  
10:45:06 13 corrected on the computer. One is the  
10:45:08 14 actual raw data itself, the second is a  
10:45:11 15 file which contains the parameters  
10:45:13 16 which the computer used to integrate  
10:45:15 17 that raw data. So basically the raw  
10:45:17 18 data is just a series of numbers which  
10:45:20 19 reflects the signals which appear on  
10:45:22 20 the detector of the mass spectrometer.

10:45:25 21 As a matter of course of the  
10:45:29 22 analysis what happens is those parameters  
10:45:31 23 which are saved in the parameter file are  
10:45:33 24 then used to attempt to integrate those  
10:45:36 25 peaks to give an isotopic number, which



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10:45:38 2 is what occurred. Now, I think as I  
10:45:40 3 explained, the laboratory staff then made  
10:45:44 4 a decision as to whether that integration  
10:45:47 5 was adequate or inadequate for reporting  
10:45:52 6 of an isotopic number.

10:45:53 7 Now on all of Mr. Landis'  
10:45:56 8 samples they made the decision that it  
10:45:58 9 was not accurate enough.

10:46:01 10 MR. PAULSSON: The integration  
10:46:02 11 that results from the software?

10:46:04 12 THE WITNESS: The integration  
10:46:06 13 as an automated feature of the analysis.

10:46:08 14 Now, they made that decision,  
10:46:10 15 as I think I made clear. I still have  
10:46:12 16 not seen anything or have heard anything  
10:46:14 17 which tells me how they made that  
10:46:15 18 decision. To me, that is still a  
10:46:17 19 subjective decision.

10:46:18 20 So after that point, they  
10:46:21 21 then go on to manually reintegrate.  
10:46:25 22 The point I make is even at that step,  
10:46:28 23 before the manual reintegration occurs,  
10:46:30 24 they've already made a subjective  
10:46:33 25 decision which invalidates the results.

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10:46:37 2 Bad chromatography cannot be corrected  
10:46:40 3 for by using manual integration. Bad  
10:46:43 4 chromatography is bad chromatography.  
10:46:45 5 And if that data which is already  
10:46:48 6 stored and never destroyed is bad data  
10:46:51 7 it's always going to be bad data.

10:46:53 8 So yes, manual reintegration  
10:46:56 9 has all sorts of problems involved with  
10:46:58 10 it, all sorts of subjectivity. We  
10:47:01 11 heard one of the operatives talking  
10:47:04 12 about how she looked at changes in the  
10:47:06 13 baseline to see the start and end of  
10:47:07 14 the peaks. This data is always  
10:47:09 15 extremely noisy, there's never a flat  
10:47:11 16 part of the data. It's always all over  
10:47:13 17 the place and yet again, there was  
10:47:16 18 still no objective discussion of how  
10:47:17 19 they determined the start and the end  
10:47:19 20 of the peak.

10:47:20 21 MR. RIVKIN: I'm sorry, we  
10:47:21 22 understood that about the initial  
10:47:25 23 analysis. But then you and Dr. Botre  
10:47:28 24 went to the lab and reprocessed the raw  
10:47:31 25 data. Dr. Botre reprocessed it using

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10:47:37 2 both the IsoPrime 1 and 2 instruments.

10:47:39 3 And used the MassLynx software, which

10:47:43 4 you had said is better software. And

10:47:46 5 came to a new analysis of the same

10:47:51 6 data. And what we're trying to figure

10:47:53 7 out is why shouldn't we put some weight

10:47:57 8 on that reanalysis.

10:48:02 9 THE WITNESS: Because the raw  
10:48:03 10 data is not valid. The chromatography is  
10:48:06 11 not sufficient to do any form of analysis  
10:48:08 12 which is going to give you reliable  
10:48:10 13 results. That is the data which is  
10:48:13 14 stored and never destroyed.

10:48:14 15 The lab operatives themselves  
10:48:17 16 agreed that the standard integration was  
10:48:19 17 not capable of providing the correct  
10:48:21 18 results. They agreed -- they showed that  
10:48:23 19 by doing the manual integration. But  
10:48:25 20 just because they go on to do manual  
10:48:27 21 integration does not correct the  
10:48:29 22 fundamental problems of data. They still  
10:48:32 23 exist.

10:48:39 24 MR. RIVKIN: I'm curious  
10:48:41 25 though because in your witness statement

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10:48:43 2 you describe the reprocessing, you  
10:48:45 3 describe what was done in the  
10:48:47 4 reprocessing and then you say the results  
10:48:49 5 are shown in a certain exhibit.

10:48:50 6 THE WITNESS: Yes.

10:48:51 7 MR. RIVKIN: You never say  
10:48:52 8 no weight can be given to those results  
10:48:54 9 because the underlying data was no  
10:48:56 10 good?

10:48:57 11 THE WITNESS: I did state  
10:48:59 12 that bad chromatography cannot be --  
10:49:02 13 cannot be fixed by manual integration.  
10:49:04 14 I'm quite certain I said that in the  
10:49:08 15 statement. I'm sorry if I wasn't clear  
10:49:10 16 what I was getting at.

10:49:11 17 MR. RIVKIN: I'm trying to  
10:49:13 18 understand it. Yes, but we're not  
10:49:15 19 talking about manual integration for  
10:49:17 20 the reprocessing, we're talking about  
10:49:19 21 running the same raw data on the new  
10:49:24 22 machine using different software.

10:49:27 23 THE WITNESS: Yes, but  
10:49:28 24 again, the underlying data is not of  
10:49:31 25 sufficient quality to permit that

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10:49:33 2 system to produce good numbers.

10:49:43 3 MR. RIVKIN: Did Dr. Botre

10:49:45 4 feel the underlying data was good

10:49:46 5 enough to come to a conclusion?

10:49:48 6 THE WITNESS: I didn't speak

10:49:49 7 to him on that matter.

10:49:51 8 MR. PAULSSON: Why not?

10:49:52 9 THE WITNESS: I was not

10:49:53 10 asked to. I was asked not to

10:49:55 11 communicate with anyone. Actually by

10:49:57 12 Mr. Dunn, he said I was not to

10:49:59 13 communicate with anyone. I was there

10:50:01 14 simply to observe the process. I was

10:50:04 15 not to ask any questions.

10:50:09 16 MR. PAULSSON: You could

10:50:10 17 have subsequently when the debate was

10:50:11 18 engaged?

10:50:12 19 THE WITNESS: I have to be

10:50:13 20 honest, it didn't actually occur to me

10:50:15 21 to ask Dr. Botre.

10:50:17 22 MR. PAULSSON: But a debate

10:50:18 23 between the two of you could have

10:50:20 24 crystallized as the proceedings went

10:50:22 25 on, no?

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10:50:23 2 THE WITNESS: I think by the  
10:50:25 3 time we left I did not have any direct  
10:50:28 4 contact with Dr. Botre. I had no  
10:50:30 5 contact details with him. I had no  
10:50:32 6 ability to write him an email or  
10:50:34 7 anything like that.

10:50:35 8 MR. PAULSSON: So as far as  
10:50:39 9 you can recall, the AAA arbitrators did  
10:50:44 10 not have -- had no reason to be aware  
10:50:47 11 that there would have been a debate  
10:50:50 12 between the two of you on this?

10:50:52 13 THE WITNESS: To the best of  
10:50:53 14 my knowledge, no. I had no communication  
10:50:55 15 with Dr. Botre after I left LNDD when the  
10:50:58 16 reprocessing occurred.

10:50:59 17 MR. RIVKIN: Can you show me  
10:51:01 18 in your witness statement where your  
10:51:04 19 statement about bad chromatography can  
10:51:08 20 --

10:51:08 21 THE WITNESS: I'm sorry, my  
10:51:09 22 testimony.

10:51:11 23 MR. RIVKIN: Your declaration,  
10:51:12 24 your declaration to us here which  
10:51:14 25 describes the reprocessing, can you show

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10:51:17 2 us where it was you said basically that  
10:51:20 3 we couldn't -- that the reprocessing was  
10:51:23 4 using bad data and therefore it shouldn't  
10:51:26 5 be --

10:51:27 6 THE WITNESS: I may not have  
10:51:28 7 said that in my statement. I may not  
10:51:31 8 have said it in my witness document,  
10:51:34 9 but I said it in my testimony. I'll  
10:51:35 10 have a look. I'm not sure it's there.

10:51:48 11 MR. WEISS: I'm just going  
10:51:49 12 to hand that to the witness, is that  
10:51:51 13 okay?

10:51:52 14 MR. RIVKIN: Sure.

10:53:03 15 MR. SUH: Mr. Rivkin, just  
10:53:05 16 so --

10:53:05 17 MR. RIVKIN: I think he's  
10:53:07 18 got an answer pending.

10:53:35 19 THE WITNESS: I don't see it  
10:53:38 20 printed directly in my witness statement,  
10:53:40 21 so.

10:53:40 22 MR. PAULSSON: Dr. Davis,  
10:53:45 23 arbitrators shouldn't have any  
10:53:46 24 premises, and I don't think we do, just  
10:53:48 25 really trying to understand what

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10:53:50 2 happened and if we don't understand you  
10:53:52 3 may or may not be able to set us on the  
10:53:54 4 right track, and if you're not, counsel  
10:53:57 5 will have an opportunity to make  
10:53:58 6 submissions.

10:53:59 7 But didn't you understand  
10:54:01 8 that your witness statement should  
10:54:03 9 contain the essence of the propositions  
10:54:05 10 which you think are important to this  
10:54:07 11 case?

10:54:08 12 THE WITNESS: Absolutely. I  
10:54:12 13 didn't realize that I hadn't quite so  
10:54:16 14 averredly missed out that particular  
10:54:18 15 statement. I did make that clear in my  
10:54:20 16 witness testimony.

10:54:21 17 MR. PAULSSON: But now, as  
10:54:22 18 you face us, you are putting it to us  
10:54:27 19 that this is quite a crucial  
10:54:30 20 proposition?

10:54:32 21 THE WITNESS: Yes. I didn't  
10:54:36 22 realize it wasn't clear in my  
10:54:37 23 testimony. I apologize for that.

10:54:46 24 MR. PAULSSON: You conducted  
10:54:53 25 some exercises which I most certainly



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10:54:58 2 understood imperfectly, there's nothing  
10:55:01 3 we can do about that, it's a lack of my  
10:55:04 4 education in this respect, but I think  
10:55:07 5 I followed the thrust of it, and one of  
10:55:10 6 the exercises you did for us was to  
10:55:17 7 suggest, to demonstrate how by aid of  
10:55:22 8 embedded parameters in the software  
10:55:26 9 manual adjustments of the definition of  
10:55:31 10 the peaks would result in different  
10:55:33 11 values.

10:55:34 12 THE WITNESS: That's  
10:55:35 13 correct, yes.

10:55:43 14 MR. PAULSSON: And we saw  
10:55:44 15 how that worked, when you moved the  
10:55:46 16 line, possibly even arbitrarily sitting  
10:55:48 17 there giving your testimony, you waited  
10:55:51 18 very briefly and some numbers would  
10:55:53 19 come up. If we wanted to mull this  
10:55:56 20 over, we're not really in a position to  
10:55:59 21 reconstitute that, that was just by way  
10:56:01 22 of illustration, wasn't it?

10:56:03 23 THE WITNESS: Exactly in the  
10:56:04 24 way that we can't reproduce what the  
10:56:06 25 staff did in the analysis of Mr.

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10:56:08 2 Landis' samples. One thing I should  
10:56:10 3 point out. Even though I believe the  
10:56:12 4 original data is not of sufficient  
10:56:14 5 quality, although we see a positive  
10:56:15 6 result here, we've seen quite  
10:56:17 7 significant shifts with the manual  
10:56:19 8 reprocessing. It could have gone the  
10:56:21 9 other way, it could have resulted in a  
10:56:23 10 negative result. Because we're seeing  
10:56:25 11 differences every time we do the manual  
10:56:27 12 processing, we don't know what results  
10:56:29 13 are going to come out. So if we sat  
10:56:31 14 the operatives there for long enough  
10:56:33 15 I'm sure we'd get a negative result as  
10:56:35 16 well. So the question is can we rely  
10:56:37 17 on it at all.

10:56:39 18 MR. PAULSSON: And do you  
10:56:40 19 believe that the changing values that you  
10:56:45 20 were showing us by way of illustration  
10:56:48 21 were of an outcome determinative  
10:56:51 22 magnitude?

10:56:52 23 THE WITNESS: Absolutely,  
10:56:53 24 yes. Absolutely. I only demonstrated  
10:56:56 25 the peak start/peak end. There's also

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10:57:00 2 another function which is the  
10:57:01 3 background, adding the background  
10:57:04 4 subtraction which I couldn't do because  
10:57:07 5 we didn't have a printer fitted, but  
10:57:09 6 that in itself can shift 10, 20 per mil  
10:57:12 7 and the combined effect can be huge.  
10:57:17 8 We have a subjective alteration in the  
10:57:19 9 results and we don't know what the  
10:57:20 10 results can be from that. That's the  
10:57:22 11 problem.

10:57:23 12 MR. PAULSSON: We may pursue  
10:57:26 13 this with counsel possibly, but that's  
10:57:28 14 enough from me to you. Thank you.

10:57:35 15 THE PRESIDENT: Thank you  
10:57:35 16 very much. That's all we need.

10:57:37 17 MR. YOUNG: May I ask a  
10:57:39 18 follow-up question?

10:57:39 19 THE PRESIDENT: Yes. I'm  
10:57:40 20 sorry, I should have asked that.

10:57:42 21 RECROSS EXAMINATION

10:57:45 22 BY MR. YOUNG:

10:57:45 23 Q. Did you just say that Mr.  
10:57:48 24 Dunn told you at the reprocessing that  
10:57:50 25 you weren't supposed to talk to

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10:57:52 2 anybody?

10:57:52 3 A. No, not at the reprocessing,  
10:57:55 4 at one of the previous visits.

10:57:56 5 Q. Mr. Dunn wasn't even at the  
10:57:59 6 reprocessing?

10:58:00 7 A. I know, that's why I said  
10:58:02 8 one of the previous visits.

10:58:08 9 MR. RIVKIN: Then let me  
10:58:10 10 reask the question because I understood  
10:58:11 11 differently. Why didn't you talk to  
10:58:13 12 Dr. Botre at the reprocessing about the  
10:58:15 13 quality of the data he was looking at,  
10:58:17 14 the process? What conversation did you  
10:58:20 15 have with him about the results?

10:58:23 16 THE WITNESS: My understanding  
10:58:24 17 is the situation was it was more of a  
10:58:26 18 mechanical process and it wasn't an  
10:58:28 19 investigative, inquisitorial process and  
10:58:31 20 I was there to see the reprocessing, and  
10:58:33 21 that was the limit of my access. I'd  
10:58:36 22 already been, quite frankly, shouted at  
10:58:38 23 by some of the counsel for trying to  
10:58:40 24 discuss matters with the operative staff  
10:58:42 25 of the laboratory. It was made

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10:58:43 2 exceptionally clear to me that I was to  
10:58:45 3 have no interaction.

10:58:46 4 I wasn't aware that I had  
10:58:47 5 the opportunity to speak to Dr. Botre  
10:58:50 6 in order to discuss scientific matters.  
10:58:53 7 Certainly to discuss acquiring a  
10:58:57 8 viewing and seeing the data, but not to  
10:58:58 9 ask his opinion of that data and  
10:59:01 10 discuss my opinion with him on his  
10:59:04 11 opinion of the data. My understanding  
10:59:05 12 was I shouldn't have done that. I  
10:59:08 13 didn't realize that was the case.

10:59:15 14 MR. PAULSSON: I'm not  
10:59:16 15 criticizing, I'm just not understanding.  
10:59:18 16 You have a debate and here is an expert  
10:59:20 17 chosen by the tribunal, presumptively  
10:59:23 18 neutral, in the middle of a sharp debate.  
10:59:30 19 And you say that this was not an  
10:59:33 20 investigation, inquisitorial -- I'm not  
10:59:38 21 sure that's what you meant, but  
10:59:40 22 suggesting that -- I'm not quite sure  
10:59:44 23 what you were there to do.

10:59:46 24 THE WITNESS: I believed it  
10:59:46 25 to be a mechanical process, to view the

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10:59:49 2 data. I didn't realize there was an  
10:59:51 3 element of discussion and investigation  
10:59:54 4 with persons outside the legal counsel.

10:59:59 5 MR. PAULSSON: You think you  
11:00:01 6 never had a -- you never had a moment  
11:00:05 7 to make your point to the neutrally  
11:00:11 8 appointed expert.

11:00:12 9 THE WITNESS: I didn't  
11:00:13 10 realize that was the case. And to be  
11:00:14 11 fair, he didn't ask me any questions  
11:00:16 12 either.

11:00:17 13 MR. PAULSSON: Yes, yes,  
11:00:18 14 whatever, however it came about.

11:00:19 15 THE WITNESS: That was my  
11:00:20 16 understanding of the situation.

11:00:22 17 MR. PAULSSON: The debate  
11:00:24 18 never materialized?

11:00:25 19 THE WITNESS: No.

11:00:47 20 MR. YOUNG: May I ask my  
11:00:48 21 other questions? Thank you.

11:00:50 22 Q. You were given a chance to  
11:00:52 23 submit written requests to Dr. Botre,  
11:00:56 24 weren't you?

11:00:57 25 A. I believe so.

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11:00:59 2 Q. And when you were there  
11:01:02 3 during the reprocessing you made  
11:01:05 4 suggestions to him on how the data  
11:01:09 5 ought to be reprocessed, right?

11:01:11 6 A. I made requests, yes.

11:01:15 7 Q. And they were all carried  
11:01:16 8 out?

11:01:16 9 A. That's correct.

11:01:18 10 Q. At the hearing your team was  
11:01:23 11 given an opportunity to ask Dr. Botre  
11:01:27 12 any questions they wanted, right?

11:01:31 13 A. I wasn't present at the full  
11:01:32 14 hearing, but if you say that's correct.

11:01:37 15 MR. SUH: I would object to  
11:01:38 16 this line of questioning. For the  
11:01:40 17 panel's benefit, we can submit the  
11:01:41 18 briefing. The issue of the access to  
11:01:44 19 experts and the access during the  
11:01:46 20 retesting and reprocessing events was a  
11:01:49 21 matter of hotly contested debate. And  
11:01:54 22 the --

11:01:55 23 THE PRESIDENT: We have read  
11:01:55 24 the descriptions of the procedural  
11:02:00 25 elements so if you want to show them to

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11:02:05 2 us again later, that's fine, but I  
11:02:06 3 think it's perfectly fair for Mr. Young  
11:02:10 4 to pursue this question.

11:02:13 5 Q. A simple question. You were  
11:02:15 6 there for the whole hearing?

11:02:16 7 A. Not the whole hearing, no.  
11:02:18 8 I wasn't present for the whole hearing.

11:02:20 9 Q. Were you there at the end of  
11:02:21 10 the hearing?

11:02:21 11 A. Yes, I was.

11:02:22 12 Q. At the end of the hearing  
11:02:23 13 didn't the panel give Mr. Landis the  
11:02:26 14 opportunity to ask Dr. Botre questions?

11:02:29 15 A. I didn't see that.

11:02:34 16 MR. YOUNG: I have no  
11:02:35 17 further questions.

11:02:36 18 THE PRESIDENT: Thank you  
11:02:37 19 very much.

11:02:38 20 MR. SUH: Yes, if I could  
11:02:40 21 ask just a few questions.

11:02:42 22 REDIRECT EXAMINATION

11:02:44 23 BY MR. SUH:

11:02:44 24 Q. Dr. Davis, as part of your  
11:02:45 25 declaration did you adopt portions of



1 SIMON DAVIS - REDIRECT

11:02:48 2 Dr. Goodman's declaration?

11:02:49 3 A. I did, yes.

11:02:50 4 Q. Would you take an  
11:02:51 5 opportunity to review the portions of  
11:02:52 6 his declaration that you adopted with  
11:02:55 7 respect to the impact of poor data on  
11:03:00 8 chromatography?

11:03:01 9 A. Would you point me to the  
11:03:04 10 page where his statement is.

11:03:05 11 Q. You have your declaration in  
11:03:07 12 front of you?

11:03:07 13 A. I do, yes.

11:03:08 14 Q. And his declaration is at  
11:03:10 15 tab 4.

11:03:25 16 MR. RIVKIN: To save time,  
11:03:27 17 what paragraph?

11:03:29 18 MR. SUH: It begins with the  
11:03:31 19 heading "Chromatography" on paragraph  
11:03:35 20 113 on Page 43.

11:04:03 21 A. Yes, but Dr. Goodman is  
11:04:05 22 reiterating what I gave in my oral  
11:04:08 23 testimony. That's probably why I  
11:04:10 24 recalled this in written testimony as  
11:04:13 25 well.

1 SIMON DAVIS - REDIRECT

11:04:19 2 THE PRESIDENT: We see that  
11:04:21 3 too, Mr. Suh. Is there anything else  
11:04:23 4 you want to ask?

11:04:24 5 MR. SUH: No further  
11:04:25 6 questions.

11:04:26 7 THE PRESIDENT: Thank you,  
11:04:27 8 Mr. Davis.

11:04:38 9 MR. YOUNG: Dr. Clark.

11:04:41 10 MR. RIVKIN: Thanks.

11:04:52 11 MR. YOUNG: Our next witness  
11:04:54 12 would be Tom Brenna.

11:05:04 13 THE PRESIDENT: Dr. Brenna,  
11:05:17 14 do you declare and affirm that the  
11:05:19 15 evidence you'll give to the tribunal  
11:05:20 16 will be your honest opinions on the  
11:05:26 17 topics discussed in your brief?

11:05:29 18 DR. BRENNNA: Yes.

11:05:31 19 THE PRESIDENT: Thank you.  
11:05:36 20 I don't give you the usual instruction  
11:05:38 21 because I understand you've been here  
11:05:40 22 and you've heard it all before about  
11:05:41 23 the process.

11:05:44 24 THE WITNESS: I've been here  
11:05:45 25 through this hearing.

1 J. THOMAS BRENN A - DIRECT

11:05:48 2 THE PRESIDENT: Thank you.

11:05:48 3 J. T H O M A S B R E N N A,  
11:05:48 4 called as a witness on behalf of the  
11:05:48 5 Respondent, having been first duly  
11:05:48 6 affirmed by the President, was examined  
11:05:50 7 and testified as follows:

11:05:50 8 DIRECT EXAMINATION

11:05:51 9 BY MR. YOUNG:

11:05:51 10 Q. Dr. Brenna, you've submitted  
11:05:53 11 a witness statement and a reply witness  
11:05:55 12 statement in this matter?

11:05:56 13 A. Yes.

11:05:57 14 Q. Do you accept those as your  
11:05:58 15 testimony?

11:05:58 16 A. Yes.

11:06:03 17 MR. YOUNG: Thank you.

11:06:04 18 THE PRESIDENT: Mr. Suh.

11:06:07 19 CROSS EXAMINATION

11:06:09 20 BY MR. SUH:

11:06:09 21 Q. Good morning, Dr. Brenna.

11:06:10 22 A. Good morning, Mr. Suh.

11:06:12 23 Q. Last time you testified at  
11:06:15 24 the AAA hearing we began our cross  
11:06:19 25 examination with a question about your

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11:06:22 2 receipt of a grant from the US  
11:06:26 3 Anti-Doping Agency, a grant in the  
11:06:27 4 amount of \$1,344,737. Do you recall  
11:06:31 5 that?

11:06:32 6 A. I recall the question.

11:06:34 7 Q. Do you recall that you  
11:06:36 8 indicated that you were receiving that  
11:06:38 9 grant?

11:06:39 10 A. I recall indicating that I'm  
11:06:42 11 receiving that grant. The actual  
11:06:44 12 number is 1.2 million. I'd like to  
11:06:48 13 also mention that in that response that  
11:06:53 14 information is on the USADA website and  
11:06:57 15 has been ever since the grant.

11:07:01 16 Q. Are you still receiving  
11:07:03 17 money from that grant?

11:07:04 18 A. Yes.

11:07:05 19 Q. Since the time you last  
11:07:06 20 appeared in this case, have you had  
11:07:10 21 other discussions with USADA about  
11:07:11 22 other potential grants that you might  
11:07:12 23 receive?

11:07:13 24 A. I have not submitted  
11:07:18 25 proposals. I have had discussions in

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11:07:22 2 generalities, however, but only  
11:07:25 3 briefly.

11:07:26 4 Q. So you've had discussions  
11:07:28 5 generally about other grants, grants  
11:07:30 6 that are different from the \$1.2  
11:07:34 7 million grant that you are currently  
11:07:36 8 receiving or currently are to receive?

11:07:39 9 A. That is correct.

11:07:40 10 Q. And what would the purpose  
11:07:41 11 of those grants be for?

11:07:45 12 A. I have discussed in  
11:07:49 13 generality a single idea that involved  
11:07:59 14 steroid testing.

11:08:01 15 Q. And what was the approximate  
11:08:05 16 dollar amount of that new and different  
11:08:08 17 grant?

11:08:09 18 A. No dollar amounts were  
11:08:10 19 discussed. We didn't get that far.

11:08:12 20 Q. Was there any discussion at  
11:08:15 21 all about the approximate amount that  
11:08:17 22 that grant would entail?

11:08:20 23 A. Honestly, no, we didn't  
11:08:21 24 discuss any numbers.

11:08:23 25 Q. What about the potential

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11:08:25 2 length of the grant period?

11:08:27 3 A. No discussions about that.

11:08:29 4 Q. And who did you have those  
11:08:30 5 discussions with?

11:08:30 6 A. Dr. Larry Bowers.

11:08:35 7 Q. And when did you have those  
11:08:37 8 discussions?

11:08:37 9 A. In the last few weeks as I  
11:08:39 10 recall.

11:08:39 11 Q. And did you have any other  
11:08:45 12 discussions with USADA about other  
11:08:48 13 potential grants that you might  
11:08:50 14 receive?

11:08:52 15 A. No.

11:08:53 16 Q. Aside from the one you just  
11:08:54 17 mentioned?

11:08:55 18 A. No, not to my recollection.

11:08:57 19 Q. Have you had any discussions  
11:09:03 20 with WADA about potential grants that  
11:09:05 21 you might receive aside from the ones  
11:09:08 22 we've been discussing?

11:09:10 23 A. No. The only grant  
11:09:12 24 opportunity that I had discussed with  
11:09:16 25 respect to WADA was one that I had to

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11:09:21 2 stop a submission, cease a submission  
11:09:26 3 as a result of this case.

11:09:27 4 Q. You had a grant application  
11:09:30 5 into WADA, and is your testimony that  
11:09:32 6 you had to withdraw that grant  
11:09:34 7 application?

11:09:35 8 A. I did not have a grant  
11:09:37 9 application into WADA. I was in the  
11:09:39 10 last stages of participating in a grant  
11:09:45 11 that was submitted, that ultimately was  
11:09:48 12 submitted, as a matter of fact, without  
11:09:50 13 my knowledge, by the Cologne lab, but  
11:09:55 14 that grant was not reviewed, so it was  
11:09:57 15 essentially taken back.

11:09:58 16 Q. When you say it was not  
11:10:00 17 reviewed, do you mean that it was not  
11:10:02 18 received or that --

11:10:03 19 A. No, it was received. It was  
11:10:06 20 not --

11:10:06 21 Q. It was then denied?

11:10:08 22 A. No, it was not reviewed.

11:10:10 23 Q. In the course of your  
11:10:14 24 career, what has been the total dollar  
11:10:16 25 value of the grant monies you have

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11:10:17 2 received?

11:10:18 3 A. From all sources?

11:10:20 4 Q. Yes. And by received, by  
11:10:22 5 definition of received, it's not just  
11:10:24 6 monies that have in fact been deposited  
11:10:28 7 in a bank account, I'm talking about  
11:10:30 8 received in terms of the value of the  
11:10:31 9 grant that you have been promised? In  
11:10:33 10 other words, if you have a 1.2 million  
11:10:35 11 grant and it's equally divided over  
11:10:38 12 three years and you are on your first  
11:10:40 13 year, my definition of received would  
11:10:43 14 be \$1.2 million --

11:10:49 15 A. Award certificates, yes.  
11:10:51 16 And my last accounting of that number  
11:10:56 17 is on the order of about \$11 million  
11:11:00 18 starting in the early nineties and  
11:11:02 19 through approximately probably a year  
11:11:08 20 or two ago. That is not corrected for  
11:11:13 21 inflation. Those are just adding up  
11:11:16 22 all the amounts for award certificates.

11:11:18 23 Q. So fair to say in the past  
11:11:20 24 18 years or so the grant that you have  
11:11:25 25 received from USADA in the amount of



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11:11:27 2 about \$1.2 million is a little over 10  
11:11:33 3 percent of your total grant monies that  
11:11:35 4 you have received, fair?

11:11:37 5 A. Based on what I've just  
11:11:39 6 said.

11:11:45 7 THE PRESIDENT: Mr. Suh,  
11:11:46 8 just to save time later can I ask one  
11:11:48 9 quick question. Are these grants,  
11:11:50 10 forgive my ignorance, made to you  
11:11:52 11 personally and used by you alone, or  
11:11:55 12 are they made to the university for you  
11:11:59 13 to use as you see fit and they may in  
11:12:04 14 fact result in other people receiving  
11:12:05 15 part of the grant?

11:12:07 16 THE WITNESS: They are all  
11:12:09 17 made to the university to support my  
11:12:12 18 research. And in fact, that \$11  
11:12:16 19 million figure involves money that's  
11:12:19 20 come to me directly as principal  
11:12:21 21 investigator. I have been involved in  
11:12:23 22 other grants that have placed equipment  
11:12:28 23 in other places in the university, and  
11:12:31 24 I didn't add that into the -- into that  
11:12:35 25 figure.

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11:12:36 2 THE PRESIDENT: Thank you.

11:12:38 3 MR. SUH: I think, if I may  
11:12:40 4 follow up on one question after your  
11:12:41 5 question.

11:12:41 6 THE PRESIDENT: Sure.

11:12:42 7 Q. Which is Dr. Brenna, that  
11:12:44 8 \$1.2 million, didn't go -- that \$1.2  
11:12:48 9 million, it is your responsibility to  
11:12:50 10 spend that and account for that monies,  
11:12:51 11 correct?

11:12:52 12 A. Correct.

11:12:52 13 Q. And in other words, of that  
11:12:55 14 \$1.2 million, some portion of it isn't  
11:12:58 15 going to some other part of Cornell  
11:12:59 16 that you are -- you don't know anything  
11:13:02 17 about or you wouldn't control, correct?

11:13:04 18 A. Incorrect.

11:13:06 19 Q. What part of it would go  
11:13:08 20 somewhere else that would be outside of  
11:13:10 21 your control?

11:13:12 22 A. That includes indirect costs  
11:13:15 23 or overhead. And I don't remember the  
11:13:20 24 total overhead, breakdown of overhead.  
11:13:23 25 I'm going to estimate it's about 25

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11:13:28 2 percent, possibly 30 percent of that  
11:13:31 3 1.2 million.

11:13:31 4 Q. But that overhead is to  
11:13:33 5 support the activities that you direct?

11:13:34 6 A. No.

11:13:36 7 Q. And what activities would it  
11:13:38 8 go to support?

11:13:39 9 A. Well, if the university  
11:13:41 10 would tell me then I would know, but --

11:13:43 11 Q. So you're not saying that  
11:13:45 12 USADA is actually granting money to you  
11:13:48 13 to pay for some of its building  
11:13:51 14 operations that are completely  
11:13:52 15 unrelated for the grant purpose that  
11:13:54 16 you have submitted, are you?

11:13:56 17 A. I'm sorry, I don't quite  
11:13:57 18 understand the question. Overhead  
11:14:00 19 pays, I'm told, I guess, for the  
11:14:03 20 building, the lights, the library,  
11:14:06 21 plowing the snow and things like that.

11:14:08 22 Q. In an amount proportional to  
11:14:09 23 the activities that you've submitted  
11:14:11 24 the grant for that you're responsible  
11:14:13 25 for?

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11:14:14 2 A. Well, that depends on the  
11:14:16 3 grant.

11:14:18 4 Q. Well I'm talking about this  
11:14:19 5 grant, not some other grant.

11:14:21 6 A. Okay, well we were talking  
11:14:22 7 about all of them a moment ago. This  
11:14:24 8 particular grant has roughly 25 percent  
11:14:29 9 devoted to overhead. The university  
11:14:33 10 takes that overhead before it deposits  
11:14:35 11 any money in accounts that I have  
11:14:36 12 access to for any activities that I  
11:14:39 13 might pursue in the context of that  
11:14:45 14 grant.

11:14:47 15 Q. Have you ever written any  
11:14:51 16 part of the ISL?

11:14:52 17 A. No.

11:14:53 18 Q. Have you written any part of  
11:14:55 19 the ISO?

11:14:57 20 A. No.

11:14:58 21 Q. Do you run a forensic  
11:15:02 22 laboratory?

11:15:03 23 A. No.

11:15:04 24 Q. And have you ever run a WADA  
11:15:07 25 accredited laboratory?

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11:15:08 2 A. No.

11:15:11 3 Q. I'd like to turn your  
11:15:19 4 attention to your rebuttal statement.

11:15:25 5 Actually, if we could go first to --

11:15:29 6 let's go first to your testimony at the

11:15:36 7 AAA panel below. It begins on 236 to

11:15:44 8 237. And if you could begin reading to

11:15:50 9 yourself so you may refamiliarize

11:15:53 10 yourself with it at the line beginning

11:16:03 11 at line 9. Excuse me, line 6 which is

11:16:07 12 the beginning of your answer to a

11:16:11 13 question that I had posed to you.

11:16:13 14 A. On Page 236?

11:16:15 15 Q. 236.

11:16:16 16 A. And how far should I read?

11:16:18 17 Q. And continue reading through

11:16:20 18 237 all the way to line 19.

11:16:53 19 A. Okay.

11:16:54 20 Q. And let me ask you this. In

11:16:58 21 your testimony below at line 12 it reads,

11:17:08 22 "It also has standards that have been, a

11:17:10 23 standard that has been added to every

11:17:12 24 sample that elutes early and that

11:17:14 25 standard is further checked to determine

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11:17:15 2 the instrument is running properly during  
11:17:17 3 analysis of a particular sample,"  
11:17:19 4 correct?

11:17:20 5 A. Yes.

11:17:20 6 Q. And that standard you were  
11:17:22 7 talking about is the internal standard,  
11:17:24 8 5-alpha androstanol AC, correct?

11:17:30 9 A. Correct.

11:17:30 10 Q. And let me ask you, when you  
11:17:32 11 testified that LNDD, and again, before  
11:17:38 12 I go on perhaps I'll draw your  
11:17:40 13 attention to Page 236, line 10, where  
11:17:44 14 you're saying they ran several sets or  
11:17:48 15 several levels of control, referring to  
11:17:49 16 the Paris lab, when you testified to  
11:17:52 17 that, that they were using the internal  
11:17:54 18 standard 5-alpha androstanol AC as a  
11:18:00 19 quality control that has been checked,  
11:18:03 20 why did you think that they were using  
11:18:04 21 it in that fashion?

11:18:07 22 A. At that time I had done a  
11:18:22 23 spot check on their delta values and  
11:18:25 24 spot check means that I looked at some  
11:18:28 25 of the values and I saw that most of

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11:18:31 2 the values -- the ones that I looked at  
11:18:33 3 were fine. And it has been pointed out  
11:18:41 4 that the delta values for some of the  
11:18:50 5 internal standards were out of the plus  
11:18:52 6 or minus .5, as I've said.

11:18:56 7 Q. My question is this: Please  
11:19:02 8 tell me all the reasons why you testified  
11:19:04 9 that the Paris lab ran 5-alpha  
11:19:09 10 androstanol AC as a quality control.  
11:19:16 11 Tell me all the reasons why.

11:19:17 12 A. All the reasons why. Well,  
11:19:24 13 one reason that remains intact for why  
11:19:26 14 they would have wanted an internal  
11:19:29 15 standard is as a quality control for  
11:19:32 16 retention time, which it worked quite  
11:19:35 17 well for.

11:19:36 18 And at the time, as I have  
11:19:41 19 said and also revised my testimony,  
11:19:49 20 that I understood that they were also  
11:19:52 21 using it as a quality control for the  
11:19:57 22 delta values.

11:19:59 23 Q. I still don't believe you've  
11:20:00 24 answered my question, which is why do  
11:20:03 25 you believe, why did you believe they

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11:20:04 2 were using it as a quality control.

11:20:12 3 Earlier in a previous answer to this

11:20:14 4 similar question you testified that you

11:20:16 5 looked at documents; is that fair?

11:20:21 6 A. I looked at documents.

11:20:23 7 Q. And what documents did you

11:20:24 8 look at?

11:20:25 9 A. I looked at the doc packs

11:20:28 10 for the most part at that point, I

11:20:30 11 think.

11:20:30 12 Q. Can you point to the

11:20:31 13 document that you looked at which led

11:20:34 14 you to believe that they were using the

11:20:36 15 internal standard as a quality control?

11:20:41 16 A. I probably can't point to

11:20:44 17 the particular one.

11:20:46 18 Q. Is it fair to say that in

11:20:48 19 your experience that an internal

11:20:53 20 standard or something referred to as an

11:20:56 21 internal standard is typically measured

11:20:58 22 for its isotopic value by laboratories

11:21:02 23 as a quality control? Is that one of

11:21:06 24 the reasons why you believe that it was

11:21:10 25 being used in this capacity?



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11:21:12 2 A. I made an unwarranted  
11:21:14 3 assumption. Do I believe that  
11:21:15 4 laboratories usually do that? That  
11:21:19 5 probably is farther than I want to go  
11:21:22 6 because one should review the standard  
11:21:25 7 operating procedures and the  
11:21:31 8 documentation of the laboratory.

11:21:33 9 Q. Do you use in your laboratory  
11:21:35 10 internal standards to determine the  
11:21:37 11 accuracy of your IRMS instruments?

11:21:40 12 A. For some analyses we do, but  
11:21:42 13 not for all.

11:21:43 14 Q. And did the fact that you --  
11:21:47 15 well, let's talk about the ones in  
11:21:48 16 which you don't use them for that  
11:21:50 17 purpose. For what reasons do you not  
11:21:53 18 use them as a quality control?

11:21:56 19 A. Well, we might use external  
11:22:04 20 standards because we don't have an  
11:22:08 21 internal standard that will elute in an  
11:22:13 22 uncrowded region of the chromatogram,  
11:22:18 23 and if we don't have an internal  
11:22:20 24 standard that will elute in an  
11:22:23 25 uncrowded region of the chromatogram,

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11:22:25 2 then the isotope ratio will not be  
11:22:28 3 usable as an internal standard.

11:22:31 4 Q. You just testified that you  
11:22:32 5 might do that. Do you in fact do that?

11:22:35 6 A. I think we in fact do that.  
11:22:40 7 Without calling a particular case to  
11:22:42 8 mind, I think we in fact do that.

11:22:44 9 Q. You think you do. You think  
11:22:46 10 you do or you do?

11:22:47 11 A. We do.

11:22:48 12 Q. Is that the way it is being  
11:22:50 13 used by LNDD here?

11:22:56 14 A. I think it is, yes.

11:22:58 15 Q. Let me ask you this: Why  
11:23:03 16 don't I show you what is Page 3 of your  
11:23:18 17 rebuttal declaration, which is RR 2.2.  
11:23:24 18 And turn your attention to paragraph 8.  
11:23:39 19 Now, before I get to questioning you  
11:23:43 20 about paragraph 8, you remember of  
11:23:46 21 course that you were the second witness  
11:23:49 22 to testify at the AAA panel hearing  
11:23:52 23 below on behalf of USADA?

11:23:53 24 A. The second witness for --

11:23:56 25 Q. Second witness overall?

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11:23:57 2 A. Second witness overall, I  
11:23:59 3 think that's correct, yes.

11:23:59 4 Q. And you remember that during  
11:24:01 5 your cross examination you were shown  
11:24:03 6 data which showed that the internal  
11:24:06 7 standard was measured outside of the  
11:24:09 8 measurement of error, correct?

11:24:11 9 A. Yes.

11:24:11 10 MR. SUH: And actually,  
11:24:14 11 Todd, could you bring up the charts.  
11:24:22 12 Maybe we'll just start with the sample  
11:24:24 13 B charts. Maybe we should do that  
11:24:34 14 first. I guess it would be USADA 351.  
11:25:23 15 And looking at USADA 351, which for the  
11:25:28 16 record is the sample B analysis of the  
11:25:31 17 IRMS results, of Exhibit 25, Dr.  
11:25:38 18 Brenna, do you recall reviewing this  
11:25:40 19 document as one of the documents which  
11:25:42 20 led you to believe that the internal  
11:25:44 21 standard was being used as a quality  
11:25:46 22 control?

11:25:47 23 A. I'm sure I looked at it.

11:25:55 24 Q. And turning your attention  
11:25:57 25 to on Page 351 the values under

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11:26:11 2 internal standard at minus 31.08, and  
11:26:20 3 then going down to fraction 3, the  
11:26:26 4 internal standard value at minus 31.54.  
11:26:34 5 And those would be outside of the  
11:26:36 6 measurement of error of plus or minus  
11:26:41 7 .5 of internal standards to determine  
11:26:47 8 isotopic value, correct?

11:26:50 9 A. Correct.

11:26:52 10 Q. Now, are there any reasons  
11:27:10 11 that you couldn't use the internal  
11:27:12 12 standards to determine isotopic value  
11:27:16 13 in these samples accurately?

11:27:25 14 A. I think you're asking me if  
11:27:29 15 there's any reason why the isotopic  
11:27:32 16 value would not be determined  
11:27:34 17 accurately in these samples and I would  
11:27:36 18 -- I've so stated.

11:27:39 19 Q. No, is there -- I believe  
11:27:42 20 that's an answer to the question. Is  
11:27:43 21 there a reason -- well, let me ask the  
11:27:46 22 question this way. Are you aware that  
11:27:48 23 Cynthia Mongongu testified that she  
11:27:50 24 could not, or LNDD could not accurately  
11:27:53 25 determine isotopic value of the

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11:27:55 2 internal standard because it typically  
11:27:58 3 elutes in an area where there's matrix  
11:28:01 4 interference?

11:28:01 5 A. Yes.

11:28:01 6 Q. Do you agree or disagree  
11:28:03 7 with that?

11:28:03 8 A. I agree for the most part.

11:28:07 9 Q. And with which part do you  
11:28:09 10 not agree?

11:28:10 11 A. I agree that in most cases  
11:28:14 12 it elutes with other interferences  
11:28:18 13 around it and not only interferences,  
11:28:24 14 but also -- not only peak interferences  
11:28:26 15 that are closely eluting, but also  
11:28:33 16 surrounding material.

11:28:35 17 Q. And of course you agree with  
11:28:37 18 the principle that if there is peak  
11:28:40 19 co-elution, that it is difficult or  
11:28:43 20 impossible to determine isotopic value  
11:28:46 21 accurately?

11:28:49 22 A. Well, let's be clear about  
11:28:51 23 it then. I agree that peak co-elution  
11:28:58 24 will lead to an isotope -- a determined  
11:29:04 25 isotope value that will be a weighted

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11:29:07 2 mean of the isotope ratios of the  
11:29:10 3 respective components in that peak.

11:29:17 4 Q. Which in fact means that the  
11:29:18 5 accurate determination of the isotopic  
11:29:21 6 value will be difficult or impossible  
11:29:24 7 to obtain, correct?

11:29:28 8 A. Depending -- it only depends  
11:29:30 9 on the relative abundances of the  
11:29:33 10 components that are co-eluting.

11:29:36 11 Q. And of course in this case  
11:29:38 12 the co-eluting peaks surrounding the  
11:29:41 13 internal standard that we see in our  
11:29:43 14 samples here, we don't know what the  
11:29:45 15 relative abundances are, correct?

11:29:47 16 A. We don't.

11:29:52 17 Q. So I'd like to turn your  
11:29:53 18 attention now that you've raised that  
11:29:54 19 point, to USADA 164. It's a  
11:29:57 20 chromatogram, an IRMS chromatogram from  
11:30:02 21 the blank F2 sample. Do you see that  
11:30:09 22 the blank F2 sample chromatogram in  
11:30:12 23 front of you there is in fact an IRMS  
11:30:14 24 chromatogram?

11:30:15 25 A. I do.

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11:30:15 2 Q. And do you see that there is  
11:30:17 3 a peak which has a -- the first peak  
11:30:24 4 that is marked minus 29.94, do you see  
11:30:28 5 that peak?

11:30:29 6 A. I do.

11:30:29 7 Q. That's the internal  
11:30:31 8 standard, isn't it?

11:30:32 9 A. Yes. I believe so.

11:30:34 10 Q. And you know that because it  
11:30:35 11 elutes somewhere around 870 seconds,  
11:30:37 12 correct?

11:30:38 13 A. I believe -- yes, that's  
11:30:39 14 correct.

11:30:39 15 Q. And this, looking at this  
11:30:43 16 peak, the internal standard, you  
11:30:45 17 recognize that this peak is outside of  
11:30:50 18 the plus or minus .5 of the determined  
11:30:52 19 isotopic value of the internal  
11:30:55 20 standard? In other words, this  
11:30:56 21 internal standard is out of whack, out  
11:30:58 22 of measure?

11:30:59 23 A. It's -- I believe this is  
11:31:00 24 the one that's out by 0.02 if I  
11:31:06 25 remember correctly.

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11:31:06 2 Q. It is out, though, correct?

11:31:07 3 A. It is out by 0.02.

11:31:11 4 Q. That sounds like you're a  
11:31:13 5 little pregnant. When you are out of  
11:31:15 6 your internal standard you are out or  
11:31:17 7 you are -- you are either in or out of  
11:31:20 8 your measurement of uncertainty,  
11:31:22 9 correct?

11:31:25 10 A. I'm trying to be precise  
11:31:27 11 about it.

11:31:29 12 Q. Actually, so am I. When  
11:31:31 13 something is outside of the determined  
11:31:34 14 measure of uncertainty for -- excuse  
11:31:38 15 me -- outside of the measurement of  
11:31:41 16 uncertainty of a determined isotopic  
11:31:43 17 value it is either in or out, correct?

11:31:46 18 A. Correct.

11:31:49 19 Q. You don't say that it is  
11:31:50 20 just a little bit out so it's okay,  
11:31:52 21 correct?

11:31:52 22 A. Not correct.

11:31:56 23 Q. So it's your testimony that  
11:31:58 24 if something is just a little bit  
11:32:01 25 outside of a known measurement of



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11:32:02 2 uncertainty that would be fine in good  
11:32:06 3 laboratory practices, correct?

11:32:07 4 A. I'm trying to formulate an  
11:32:16 5 answer which covers this. No, that  
11:32:22 6 wouldn't be correct either.

11:32:26 7 Q. Do you see any matrix  
11:32:28 8 interference around this internal  
11:32:30 9 standard?

11:32:30 10 A. No.

11:32:31 11 Q. So the reason posited by Ms.  
11:32:34 12 Mongongu about the inability of LNDD to  
11:32:38 13 determine accurately their internal  
11:32:41 14 standard isotopic value, because of  
11:32:45 15 matrix interference, does not hold true  
11:32:47 16 for this particular chromatogram,  
11:32:49 17 correct?

11:32:49 18 A. It doesn't appear to,  
11:32:52 19 correct.

11:32:52 20 Q. Turning your attention now  
11:33:16 21 back to RR 2.2 -- excuse me, your  
11:33:20 22 rebuttal statement.

11:33:23 23 MR. SUH: Todd, that's  
11:33:24 24 paragraph 8.

11:33:38 25 Q. Do you see there the second

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11:33:39 2 sentence that begins "In cross  
11:33:44 3 examination after direct testimony, at  
11:33:45 4 that time I did not understand that the  
11:33:47 5 5-alpha androstanol was added for the  
11:33:49 6 restricted use as a retention time  
11:33:51 7 marker. Even so, my testimony does not  
11:33:54 8 contradict the AAA panel statement,  
11:33:56 9 because the 5-alpha androstanol does in  
11:33:58 10 fact show that the instrument is working  
11:34:00 11 properly with respect to retention time  
11:34:02 12 precision." Do you see that?

11:34:03 13 A. I do.

11:34:03 14 Q. First, let's take that last  
11:34:06 15 sentence because what you've written is  
11:34:09 16 actually very specific. You say, "The  
11:34:12 17 5-alpha androstanol not does in fact  
11:34:15 18 show the instrument is working properly  
11:34:17 19 with respect to retention time  
11:34:19 20 precision," but not with respect to  
11:34:21 21 everything, correct?

11:34:27 22 A. With respect -- we just  
11:34:29 23 showed that's true. There are other  
11:34:31 24 explanations for why that delta might  
11:34:34 25 be out, however.

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11:34:36 2 Q. But you are not saying in  
11:34:40 3 this sentence that the 5-alpha  
11:34:42 4 androstanol shows that the instrument  
11:34:44 5 is working properly with respect to its  
11:34:47 6 ability to accurately determine  
11:34:49 7 isotopic values, correct?

11:34:50 8 A. Correct.

11:34:51 9 Q. It couldn't because there  
11:34:52 10 are values that are outside of the  
11:34:54 11 measurement of error for the determined  
11:34:56 12 isotopic value?

11:34:58 13 A. Correct. And they don't  
11:34:59 14 keep track of the isotope ratio of the  
11:35:01 15 standard either, so.

11:35:16 16 Q. Now turning to the second  
11:35:17 17 sentence you say "At that time I did  
11:35:19 18 not understand that the 5-alpha  
11:35:22 19 androstanol was added for the  
11:35:24 20 restricted use as a retention time  
11:35:26 21 marker." But you understand that now,  
11:35:28 22 correct?

11:35:28 23 A. Correct.

11:35:29 24 Q. And how did you come to that  
11:35:30 25 understanding?

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11:35:31 2 A. Well, in the document  
11:35:35 3 packages which are written in French,  
11:35:37 4 and I don't read the language, there's  
11:35:39 5 a specific specification indicating  
11:35:45 6 that the internal standard is used as a  
11:35:51 7 retention time marker, that is to say  
11:35:53 8 that the flow rates are to be set so  
11:35:59 9 that the internal standard elutes at a  
11:36:03 10 particular time. 870 seconds is the  
11:36:05 11 time for the GC/C/IRMS instrument.

11:36:09 12 Q. Let me just make sure that I  
11:36:10 13 understand your statement. You're  
11:36:12 14 saying that there are documents within  
11:36:13 15 the doc pack which show that the  
11:36:15 16 internal standard is used as a  
11:36:17 17 retention time marker, correct?

11:36:18 18 A. I am.

11:36:19 19 Q. Do those statements say that  
11:36:21 20 it is not used as a quality control?

11:36:24 21 A. It's a quality control for  
11:36:28 22 retention time, yes.

11:36:29 23 Q. No, that's not my question.  
11:36:30 24 Do they not -- do they -- do any of  
11:36:37 25 those documents say that the internal

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11:36:39 2 standard is not used for the purpose of  
11:36:41 3 determining accuracy of the instrument  
11:36:43 4 in the sample?

11:36:45 5 A. For delta values there is  
11:36:48 6 nowhere that I know of where it states  
11:36:50 7 that the internal standard is not to be  
11:36:53 8 used.

11:36:54 9 Q. So because there is a  
11:36:57 10 statement in the document pack that  
11:37:00 11 says that the internal standard is used  
11:37:03 12 as a retention time marker, you are  
11:37:05 13 assuming that it is also not used as a  
11:37:08 14 quality control, correct?

11:37:10 15 A. It is used as a quality  
11:37:12 16 control for retention time.

11:37:14 17 Q. I'm talking about as a  
11:37:15 18 quality control for accuracy?

11:37:17 19 A. For delta value. It is not  
11:37:20 20 -- and I am assuming that based on my  
11:37:23 21 experience.

11:37:24 22 Q. Your testimony in the AAA  
11:37:27 23 panel was that the internal standard  
11:37:28 24 was used as a quality control for  
11:37:31 25 accuracy and your testimony now is that

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11:37:34 2 it is not used as a quality control for  
11:37:36 3 accuracy because of something you have  
11:37:38 4 read. So I'm asking you whether or not  
11:37:40 5 what you have read says that it is not  
11:37:42 6 used as a quality control for accuracy?

11:37:46 7 A. For delta value that is  
11:37:49 8 correct.

11:37:49 9 Q. So you are assuming now that  
11:37:52 10 the internal standard is only used as a  
11:37:56 11 retention time marker and not as a  
11:37:59 12 quality control for accuracy, correct?

11:38:01 13 A. Correct.

11:38:04 14 Q. I'd like to put before you  
11:38:16 15 the LNDD's response to the second  
11:38:20 16 request for production of documents  
11:38:23 17 which begins on Page 6 and continues on  
11:38:28 18 to Page 7.

11:38:44 19 THE PRESIDENT: Is this the  
11:38:45 20 same one you showed us the other day?

11:38:47 21 MR. SUH: Yes.

11:39:05 22 Q. If you could turn first to  
11:39:07 23 Page 6 and read from Page 6 through to  
11:39:15 24 Page 7.

11:39:35 25 THE PRESIDENT: Just before

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11:39:36 2 you proceed, could we just clarify,  
11:39:38 3 have you ever seen that document  
11:39:39 4 before, the document request that  
11:39:42 5 that's now on the screen?

11:39:43 6 THE WITNESS: I'm not sure.  
11:39:45 7 I'm seeing only a piece of it here, so  
11:39:47 8 I'm not sure, I'm sorry.

11:39:48 9 THE PRESIDENT: Could the  
11:39:49 10 witness just be shown the hard copy.

11:39:51 11 THE WITNESS: I was waiting  
11:39:53 12 for that.

11:40:13 13 A. You wish me to read the  
11:40:14 14 whole thing?

11:40:15 15 Q. Have you read it before  
11:40:16 16 today?

11:40:17 17 A. What I've been handed goes  
11:40:23 18 from Page 1 to Page 6 so I'm not sure --

11:40:25 19 Q. I'm talking about from Page  
11:40:27 20 6, paragraph 4. You can skip the first  
11:40:30 21 two paragraphs -- well, the first full  
11:40:33 22 paragraph which deals with the T/E  
11:40:37 23 ratios.

11:40:38 24 MR. BARNETT: Could we just  
11:40:39 25 ask that the witness be given a

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11:40:41 2 complete copy of the document. It  
11:40:42 3 skips from Page 1 to Page 6. It's  
11:40:45 4 missing pages.

11:41:59 5 A. The document looks very  
11:42:00 6 familiar to me. I think I might have  
11:42:03 7 read it awhile ago. I certainly  
11:42:04 8 haven't looked at it in the last couple  
11:42:06 9 of months.

11:42:07 10 Q. Looking at the paragraph  
11:42:10 11 beginning "More importantly, the  
11:42:13 12 requested information is completely  
11:42:15 13 unnecessary," which is on Page 7."

11:42:18 14 A. Okay. You'd like me to read  
11:42:26 15 that paragraph?

11:42:26 16 Q. Yes.

11:42:53 17 A. Okay.

11:42:54 18 Q. Does that change your  
11:42:55 19 opinion as to whether or not the  
11:42:56 20 internal standard was used as a quality  
11:42:58 21 control for accuracy?

11:43:01 22 A. Just give me a second. It  
11:43:22 23 doesn't specifically state that. It  
11:43:27 24 gives a for instance, signal strength  
11:43:30 25 or measured value. If it says measured



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11:43:33 2 values and specified that then I would  
11:43:35 3 agree with you.

11:43:39 4 Q. So this statement doesn't  
11:43:41 5 give you any pause with respect to your  
11:43:43 6 current testimony that the internal  
11:43:46 7 standard is not used in the samples as  
11:43:49 8 a quality control for accuracy?

11:43:51 9 A. In the context of everything  
11:43:54 10 I know about it, I believe it's  
11:43:58 11 reasonable.

11:43:59 12 Q. You believe what is  
11:44:00 13 reasonable? Does it give you any --

11:44:04 14 A. It doesn't change my opinion  
11:44:05 15 in the context of what I know about the  
11:44:06 16 analyses.

11:44:07 17 Q. Does it give you -- let me  
11:44:20 18 read one portion of it. "One can  
11:44:22 19 determine that the assay and instrument  
11:44:23 20 were performing properly when the  
11:44:25 21 instrument provides data on the  
11:44:27 22 internal standards and positive and  
11:44:28 23 negative controls within the range that  
11:44:30 24 is acceptable, for example, for signal  
11:44:33 25 strength or measured value." Does that

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11:44:35 2 statement give you any pause with  
11:44:38 3 respect to your conclusion that LNDD  
11:44:39 4 does not use the internal standard for  
11:44:41 5 purposes of a quality control for  
11:44:43 6 accuracy?

11:44:44 7 A. Had that sentence been  
11:44:47 8 uttered to me by a person who wrote it,  
11:44:50 9 whomever that is, I would have asked  
11:44:52 10 for clarification as to what precisely  
11:44:56 11 the internal standard is used for.

11:44:58 12 Q. And you would ask for  
11:45:00 13 clarification because it would give you  
11:45:01 14 some pause, correct?

11:45:02 15 A. In that restricted  
11:45:06 16 definition of the words give me some  
11:45:09 17 pause, yes, that's correct, certainly.

11:45:10 18 Q. And certainly, you didn't  
11:45:13 19 see --

11:45:16 20 MR. RIVKIN: Let me just ask  
11:45:17 21 a question so I'm clear. You're using  
11:45:20 22 a lot of terms about pause and so  
11:45:22 23 forth. As I understand it your  
11:45:24 24 testimony is the internal standard is  
11:45:25 25 not used as a quality control, right?

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11:45:27 2 THE WITNESS: Correct.

11:45:28 3 MR. RIVKIN: And this

11:45:29 4 statement seems to say that it is used

11:45:31 5 for a quality control, doesn't it?

11:45:34 6 THE WITNESS: It says that

11:45:35 7 it may be, it says or, for example, for

11:45:38 8 signal strength or measured value. I

11:45:41 9 interpret measured value not as the

11:45:42 10 retention time which he could be

11:45:44 11 referring to, but as delta value.

11:45:46 12 MR. RIVKIN: Right. And if

11:45:47 13 it meant delta value that would be a

11:45:50 14 wrong statement in your understanding,

11:45:53 15 right?

11:45:53 16 THE WITNESS: That's not --

11:45:55 17 that's not the way I read the doc pack

11:45:57 18 as the way they use the internal

11:45:59 19 standard, but if he has said this is

11:46:01 20 used as a quality control for our delta

11:46:05 21 value and if those are out then we toss

11:46:09 22 the run, then that would be in

11:46:13 23 contradiction.

11:46:14 24 MR. RIVKIN: To what you

11:46:15 25 understand?

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11:46:15 2 THE WITNESS: That's right.

11:46:16 3 MR. RIVKIN: Thank you.

11:46:29 4 Q. At the very least, you were  
11:46:31 5 not shown this document prior to the  
11:46:33 6 time you made your -- you came to your  
11:46:37 7 conclusion in your declaration  
11:46:40 8 submitted to this panel that the  
11:46:42 9 internal standard is not used as a  
11:46:44 10 quality control?

11:46:44 11 A. No, I was shown the  
11:46:46 12 document. I was shown the document.  
11:46:48 13 And I was shown many, many, many  
11:46:50 14 documents, we're all aware of -- I  
11:46:54 15 shouldn't say that. I was shown many  
11:46:56 16 documents. One might say that this  
11:47:00 17 sentence did not make me pause. Maybe  
11:47:03 18 it should have, but I did see it before  
11:47:06 19 I made my statement. I certainly  
11:47:08 20 wasn't thinking of this statement when  
11:47:09 21 I wrote my statement.

11:47:11 22 Q. So your testimony is you had  
11:47:15 23 this statement prior to the time you  
11:47:19 24 wrote your declaration?

11:47:21 25 A. Yes.

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11:47:22 2 Q. And you knew about it,  
11:47:25 3 correct?

11:47:26 4 A. Well I'm sure I read it.

11:47:30 5 Q. Again, let's be precise.  
11:47:32 6 Did you read it or did you not read it  
11:47:35 7 before you wrote your declaration?

11:47:38 8 A. I did read it.

11:47:39 9 Q. And you had just testified  
11:47:43 10 that if you were having an open  
11:47:45 11 conversation back and forth with  
11:47:46 12 somebody it would have -- and if this  
11:47:49 13 statement was uttered to you it would  
11:47:51 14 have caused you to ask further  
11:47:55 15 questions, correct?

11:47:56 16 A. Correct.

11:47:57 17 Q. But in the context of  
11:47:58 18 submitting a declaration to this panel,  
11:48:02 19 your statement about internal standard  
11:48:05 20 as a quality control didn't contain any  
11:48:08 21 mention of this statement, right?

11:48:10 22 A. I'd like to clarify when I  
11:48:13 23 read this. The date on this -- can you  
11:48:16 24 tell me the date on this document, when  
11:48:17 25 this was submitted?

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11:48:19 2 Q. I think we put the whole  
11:48:21 3 document in front of you. It is an  
11:48:23 4 exhibit in a document that we were  
11:48:24 5 served with as part of the discovery  
11:48:28 6 responses in this case.

11:48:35 7 A. The date on this Fed Ex --  
11:48:38 8 sorry, the date on this letter is  
11:48:40 9 February 7th, 2007. Yes, of course.  
11:48:41 10 Okay. So I'm fairly sure that I read  
11:48:44 11 this prior to the first hearing.

11:48:50 12 Q. I'm sorry, could you repeat  
11:48:52 13 your answer.

11:48:52 14 A. I'm fairly sure that the  
11:48:54 15 last time I read this was prior to the  
11:48:56 16 first hearing. So I didn't read it  
11:49:02 17 recently.

11:49:03 18 Q. So you had forgotten about  
11:49:05 19 it?

11:49:05 20 A. Yes, I think I made that  
11:49:07 21 clear.

11:49:07 22 Q. Let's turn now to the issue  
11:49:57 23 of identification of peaks. In your  
11:50:06 24 declaration at -- in your first  
11:50:09 25 declaration that you submitted at Page

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11:50:23 2 12, the bottom of Page 12, you have a  
11:50:41 3 paragraph entitled "Identification of  
11:50:48 4 peaks," right?

11:50:49 5 A. Yes.

11:50:49 6 Q. And your paragraph reads, the  
11:50:52 7 first paragraph, "In fact, based upon my  
11:50:57 8 extensive experience in this field and my  
11:51:00 9 thorough review of the documents, I  
11:51:01 10 conclude LNDD method for identification  
11:51:07 11 is based on an inspection of the  
11:51:09 12 respective chromatograms with a careful  
11:51:12 13 consideration of basic chemical  
11:51:13 14 principles," and it goes on to talk about  
11:51:17 15 the preparation of samples and standards  
11:51:19 16 as well as the condition and detection  
11:51:21 17 mechanisms for GC/MS and GC/C/IRMS. So  
11:51:26 18 can you tell me what it is that is your  
11:51:30 19 understanding of the method that LNDD  
11:51:33 20 uses to identify its peaks?

11:51:36 21 A. The basis of my statement  
11:51:42 22 here is my review of the document  
11:51:45 23 packages and the data that were in the  
11:51:47 24 document packages and discussions with  
11:51:51 25 the technicians which really were a

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11:51:53 2 small number of discussions, and  
11:51:55 3 listening to the testimony.

11:51:58 4 Q. When you say the testimony  
11:51:59 5 you mean which testimony?

11:52:00 6 A. Testimony of the  
11:52:02 7 technicians.

11:52:03 8 Q. At which proceeding?

11:52:05 9 A. Both proceedings.

11:52:07 10 Q. So you were here for the  
11:52:09 11 testimony of both Ms. Frelat and Ms.  
11:52:11 12 Mongongu here?

11:52:12 13 A. I was.

11:52:13 14 Q. So can you tell me what  
11:52:17 15 method LNDD uses to identify the peaks?

11:52:22 16 A. The first stage in the  
11:52:30 17 method is to run GC/MS using a standard  
11:52:41 18 called the mixed acetate that has all  
11:52:46 19 the metabolites added presumably from  
11:52:54 20 purified standards that would have been  
11:52:56 21 purchased from a -- purchased  
11:52:58 22 commercially. They run that standard  
11:53:03 23 and then they run each of the fractions  
11:53:08 24 from the blank urine and the athlete's  
11:53:15 25 urine. And when they run those by



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11:53:18 2 GC/MS they obtain a mass spectra which  
11:53:26 3 at one level can be considered a  
11:53:27 4 fingerprint of the material eluting  
11:53:34 5 from the GC column at each moment you  
11:53:39 6 can say, each second. And that  
11:53:46 7 provides unambiguous identification of  
11:53:48 8 each of the metabolites.

11:53:51 9 So it is therefore known  
11:53:58 10 that each of the fractions contains  
11:54:02 11 certain analytes. That's also  
11:54:06 12 confirmed by what are known as multiple  
11:54:11 13 ion chromatograms which are shown in  
11:54:13 14 the doc pack that show that the ions  
11:54:16 15 that are characteristic of each steroid  
11:54:22 16 elute together at the proper retention  
11:54:25 17 time.

11:54:30 18 They then move -- oh, one  
11:54:32 19 other thing is that each sample  
11:54:34 20 includes an internal standard, and that  
11:54:40 21 internal standard is the one peak that  
11:54:44 22 doesn't change from chromatogram to  
11:54:47 23 chromatogram. That peak is always in  
11:54:50 24 the sample regardless of the other  
11:54:53 25 peaks in the sample.

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11:54:54 2 So another way you can  
11:54:55 3 identify the internal standard is by  
11:54:58 4 considering all of the chromatograms  
11:55:02 5 consecutively and simply looking for  
11:55:04 6 the peak that is the same in each one.

11:55:09 7 You then turn to GC  
11:55:11 8 combustion IRMS and another standard  
11:55:22 9 called Mix Cal Acetate which contains a  
11:55:25 10 subset of four of the steroids that's  
11:55:29 11 in the Mix Acetate is run before and  
11:55:37 12 after the blank urines and the  
11:55:39 13 athlete's urines. And that material  
11:55:48 14 contains the internal standard and it  
11:55:49 15 contains, at least in the case of  
11:55:53 16 fraction 3, also the 5-beta diol, which  
11:55:58 17 serve as retention time anchors and  
11:56:05 18 those can be used to establish the  
11:56:11 19 relationship between retention times in  
11:56:15 20 GC/MS and GC/C/IRMS. And either of  
11:56:20 21 those can be used to calculate a  
11:56:22 22 relative retention time, for instance.

11:56:25 23 And that is sufficient  
11:56:26 24 information knowing what steroids are  
11:56:31 25 in each fraction and their -- and the

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11:56:37 2 elution times of standards to assign  
11:56:39 3 the peaks.

11:56:39 4 Q. You said that you reviewed  
11:56:47 5 documents to come to this conclusion  
11:56:49 6 that this is the identification method  
11:56:51 7 used by LNDD, correct?

11:56:53 8 A. I would have to -- I think  
11:57:02 9 it is what I said. I'm just going to  
11:57:06 10 say yes to that. Proceed. Yes.

11:57:10 11 Q. What documents did you  
11:57:13 12 review to conclude that that is your  
11:57:16 13 method -- that is LNDD's method of  
11:57:18 14 identification?

11:57:20 15 A. I reviewed the doc packs and  
11:57:26 16 I reviewed additional material that  
11:57:29 17 they provided in various requests, in  
11:57:33 18 response to various requests, for  
11:57:35 19 instance, the mass spectra.

11:57:38 20 Q. Do you know if all the  
11:57:39 21 documents that you reviewed were  
11:57:40 22 documents that were provided to Mr.  
11:57:42 23 Landis?

11:57:43 24 A. Yes, they were. Well,  
11:57:46 25 that's my understanding. They're

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11:57:48 2 labeled in the exhibits.

11:57:50 3 Q. And did you ever review SOPs  
11:57:55 4 on this method of identification that  
11:57:59 5 you just described?

11:58:00 6 A. No.

11:58:03 7 Q. So your conclusion that this  
11:58:08 8 is the method that LNDD uses is based  
11:58:13 9 upon a review of the doc pack, number  
11:58:16 10 1, and a review of other documents,  
11:58:20 11 mass spectra documents, and interviews  
11:58:24 12 with technicians, correct?

11:58:26 13 A. Emphasizing the documents,  
11:58:29 14 correct.

11:58:30 15 Q. Is it your testimony that  
11:58:33 16 the testimony of the technicians didn't  
11:58:39 17 matter at all with respect to your  
11:58:42 18 conclusion that this is the way LNDD  
11:58:46 19 conducts its IRMS identification  
11:58:49 20 method?

11:58:51 21 A. I think I misspoke a moment  
11:58:53 22 ago. The testimony certainly figured  
11:58:55 23 into it, but I meant to say that  
11:58:57 24 personal conversations were not a large  
11:58:59 25 part of -- of the input into my

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11:59:05 2 opinion.

11:59:06 3 And I think it's good -- I  
11:59:08 4 think it's important for me to clarify  
11:59:11 5 that I evaluated the doc packs and  
11:59:17 6 LNDD's method for identification and my  
11:59:21 7 statement which is represented here is  
11:59:24 8 based on my consideration of the  
11:59:30 9 results that they report. The  
11:59:32 10 identifications I believe are correct  
11:59:34 11 based on the data that are in the doc  
11:59:38 12 packs. And so I was not evaluating  
11:59:43 13 these data or any of the information in  
11:59:47 14 this material.

11:59:51 15 Q. Dr. Brenna, I'm not -- I'm  
11:59:53 16 asking about the method --

11:59:55 17 A. No, I wasn't done.

11:59:56 18 MR. YOUNG: Objection. The  
11:59:57 19 witness hasn't finished his answer.

12:00:00 20 THE PRESIDENT: Please  
12:00:01 21 continue.

12:00:01 22 A. I was reviewing the material  
12:00:03 23 to reach a conclusion as to whether the  
12:00:06 24 assignments were correct and my  
12:00:10 25 statement here refers to my opinion

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12:00:16 2 that the conclusions are correct and  
12:00:18 3 that everything I've heard from them is  
12:00:22 4 consistent with what I see in the doc  
12:00:25 5 packs.

12:00:25 6 Q. And everything you heard  
12:00:26 7 from them, and them is the LNDD  
12:00:28 8 technicians?

12:00:29 9 A. Correct, and -- yes,  
12:00:32 10 correct.

12:00:37 11 Q. And some of those  
12:00:38 12 discussions were private conversations,  
12:00:40 13 not testimony?

12:00:40 14 A. Very, very few.

12:00:41 15 Q. And when did those take  
12:00:43 16 place?

12:00:43 17 A. There might have been a  
12:00:59 18 conversation or two -- conversation is  
12:01:02 19 probably more than -- probably  
12:01:05 20 overrepresents our communication.  
12:01:06 21 There was never a translator. I don't  
12:01:08 22 speak French. And there were I'm sure  
12:01:11 23 a question or two or three in the  
12:01:14 24 context of this hearing.

12:01:16 25 Q. And the documents that you

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12:01:17 2 reviewed, when did you receive those  
12:01:21 3 documents? Did you receive them before  
12:01:22 4 or after the AAA panel hearing?

12:01:27 5 A. Probably before.

12:01:29 6 Q. And prior to your testimony  
12:01:33 7 at the AAA panel hearing you reviewed  
12:01:35 8 those documents, correct?

12:01:36 9 A. Yes.

12:01:40 10 Q. So let's turn to your  
12:01:42 11 testimony at the AAA panel hearing.  
12:01:45 12 It's at Page 255. And it begins on --  
12:02:06 13 actually, why don't you begin on Page  
12:02:08 14 254 and begin reading from line 20 to  
12:02:14 15 refresh your recollection, all the way  
12:02:16 16 down to Page 256.

12:02:39 17 A. Okay.

12:02:40 18 Q. And in that exchange of  
12:02:43 19 questions between you and me I was  
12:02:47 20 asking, we were discussing both the  
12:02:51 21 GC/MS chromatogram and the IRMS  
12:02:53 22 chromatogram, correct?

12:02:56 23 A. Yes, I believe so.

12:03:04 24 Q. And when you were discussing  
12:03:07 25 the GC/MS and GC/C/IRMS chromatogram

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12:03:11 2 you were comparing -- you testified  
12:03:14 3 that because the GC/MS delivers  
12:03:18 4 structural information it allows you to  
12:03:22 5 -- it tells you which is which and that  
12:03:25 6 helps you identify the testosterone  
12:03:29 7 metabolites in the IRMS chromatogram,  
12:03:31 8 correct?

12:03:32 9 A. Yes.

12:03:33 10 Q. And at that time when you  
12:03:38 11 were talking about the identification  
12:03:40 12 of the metabolites in the IRMS  
12:03:42 13 chromatogram you did not give the  
12:03:44 14 explanation that you have given today  
12:03:47 15 about how LNDD identifies the  
12:03:50 16 testosterone metabolites in its IRMS  
12:03:53 17 method, correct?

12:03:54 18 A. I think they seem to be  
12:03:59 19 descriptions of very similar processes.

12:04:02 20 Q. So your testimony is that  
12:04:03 21 what you have just said here today is  
12:04:08 22 LNDD's method and that that is very  
12:04:11 23 similar to what is contained on Pages  
12:04:13 24 254 through 256, correct?

12:04:16 25 A. Sorry, my eyes skipped when



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12:04:27 2 I read this and I didn't look at this  
12:04:29 3 page. Yes, I think they're consistent.

12:04:36 4 Q. I'd like to turn your  
12:05:25 5 attention to the last page of your  
12:05:30 6 reply declaration to paragraph 19. Do  
12:05:53 7 you see that it says that you performed  
12:05:55 8 an experiment in which you actually  
12:05:57 9 tested the retention order of the four  
12:05:59 10 steroids in the F3 fraction using the  
12:06:03 11 DB 17 column and the HP 5 column,  
12:06:08 12 right?

12:06:08 13 A. Yes.

12:06:09 14 Q. And you realize of course  
12:06:10 15 that that -- the issue of whether or  
12:06:13 16 not the proper column was used by LNDD  
12:06:17 17 is -- has been a substantial issue in  
12:06:19 18 this case, correct?

12:06:20 19 A. I understand it's been  
12:06:22 20 raised.

12:06:23 21 Q. And do you -- and you  
12:06:27 22 understand that there has been an  
12:06:28 23 argument that the same column was used  
12:06:30 24 by LNDD and that different columns --  
12:06:33 25 and that Mr. Landis has made the

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12:06:36 2 argument that different columns were  
12:06:38 3 used or may have been used, correct?

12:06:44 4 A. Could you repeat the  
12:06:45 5 question.

12:06:46 6 Q. Let me ask the question this  
12:06:48 7 way. You felt it was important enough  
12:06:52 8 to perform an experiment in which you  
12:06:55 9 tested the retention order of the four  
12:06:58 10 steroids in the F3 fractions using  
12:07:01 11 different columns, right?

12:07:02 12 A. Yes.

12:07:02 13 Q. And yet did you provide any  
12:07:05 14 data from that experiment aside from  
12:07:08 15 your simple statement here that they  
12:07:10 16 elute in the same order?

12:07:11 17 A. No.

12:07:13 18 Q. I'd like to turn your  
12:07:26 19 attention to in the same declaration  
12:07:33 20 Page 2, paragraph 3, where you say "The  
12:07:50 21 reprocessing on May 4-5 May of 2007  
12:07:54 22 directly undermines Dr. Goodman's  
12:07:56 23 argument because the test results did  
12:07:58 24 not change when automatic processing  
12:08:00 25 was done. When, at the request of Mr.

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12:08:03 2 Landis' experts, the raw data was  
12:08:05 3 reprocessed automatically by the  
12:08:07 4 software without any manual  
12:08:08 5 corrections, the delta/delta result was  
12:08:10 6 that Mr. Landis' sample was determined  
12:08:12 7 to be more positive."

12:08:14 8 And this discussion I  
12:08:15 9 believe arose, it did arise at the AAA  
12:08:21 10 panel from a summary chart of values  
12:08:22 11 that was shown to you during the AAA  
12:08:29 12 panel's hearing. I'm going to put that  
12:08:31 13 up it's GDC 1351. It's 1350. You  
12:09:01 14 remember this chart, right, Dr. Brenna?

12:09:03 15 A. I do.

12:09:04 16 Q. And let me take you through  
12:09:10 17 some of the -- actually, let me ask you  
12:09:15 18 some preliminary questions.

12:09:17 19 Now, you have been involved  
12:09:22 20 in research, Dr. Brenna, haven't you,  
12:09:24 21 that deals with determining and  
12:09:31 22 refining the ability of computer  
12:09:34 23 algorithms to properly integrate peaks  
12:09:37 24 without individual technicians'  
12:09:43 25 insertion of judgment I guess is the

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12:09:44 2 best way to put it; is that fair?

12:09:48 3 A. No.

12:09:49 4 Q. Tell me in what way it is  
12:09:51 5 not fair?

12:09:53 6 A. The goal of our research  
12:09:57 7 into algorithms to convert raw  
12:10:05 8 GC/C/IRMS data into delta values is to  
12:10:11 9 improve their reliability. We never  
12:10:15 10 stated, to my knowledge that our  
12:10:18 11 fundamental or principal goal is to --  
12:10:24 12 is to create software that requires no  
12:10:27 13 intervention.

12:10:28 14 Q. Your attempts, or your  
12:10:31 15 research with respect to creating more  
12:10:35 16 accurate integration algorithms has  
12:10:40 17 been ongoing for awhile; is that fair?

12:10:42 18 A. Yes, on and off.

12:10:44 19 Q. And that research that you  
12:10:46 20 have been conducting uses what  
12:10:49 21 principles -- well, let me ask you this  
12:10:53 22 question.

12:10:53 23 Is it fair to say that the  
12:10:59 24 more sophisticated the computer  
12:11:01 25 algorithm, the less you would be forced

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12:11:04 2 to rely upon individual technicians'  
12:11:08 3 judgment, correct?

12:11:09 4 A. No.

12:11:10 5 Q. Let me ask you this  
12:11:11 6 question. In your sophisticated  
12:11:13 7 computer algorithms do you -- are you  
12:11:16 8 -- would you allow for the kinds of  
12:11:19 9 processes that occurred in this case to  
12:11:22 10 occur for your research?

12:11:24 11 A. Yes, we build them in. In  
12:11:26 12 fact, we wrote some of the first  
12:11:28 13 software that allows it to be done.

12:11:30 14 Q. So explain how in your  
12:11:33 15 sophisticated computer algorithms that  
12:11:36 16 would work?

12:11:37 17 A. We've incorporated, for  
12:11:44 18 instance, the capability to permit a  
12:11:49 19 user to evaluate the robustness of a  
12:11:53 20 delta value by moving the cursors for  
12:11:56 21 peak start and stop while actually  
12:12:01 22 watching the delta value update in real  
12:12:03 23 time. So simply moving it out, we  
12:12:05 24 don't have to press a button, we move  
12:12:07 25 it out and in and you watch the delta

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12:12:09 2 value change as you move it, for  
12:12:12 3 instance.

12:12:12 4 Q. And that process, is that  
12:12:14 5 process to be done on an actual sample  
12:12:17 6 that is being tested?

12:12:19 7 A. Yes.

12:12:20 8 Q. And once the values are  
12:12:22 9 changed, does your computer algorithm  
12:12:25 10 allow the changed value to stand and  
12:12:28 11 stand alone as the final isotopic  
12:12:31 12 value?

12:12:32 13 A. Yes, but it is always  
12:12:41 14 possible to recover the original result  
12:12:42 15 as was done in this case.

12:12:44 16 Q. So your testimony is that  
12:12:45 17 your new computer algorithm would allow  
12:12:48 18 you, your very sophisticated computer  
12:12:53 19 algorithm would allow the technician to  
12:12:56 20 move the start and stop of the end  
12:12:58 21 peaks on a sample and then continue on  
12:13:00 22 with the reprocessed sample and declare  
12:13:04 23 that final value as the determined  
12:13:06 24 isotopic value of the peak in question?

12:13:08 25 A. Yes.

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12:13:10 2 Q. Let me ask you this  
12:13:11 3 question, Dr. Brenna. Isn't it true  
12:13:13 4 that for your software the moving of  
12:13:18 5 the start and end of a peak is  
12:13:21 6 primarily used as a diagnostic tool for  
12:13:25 7 your computer software?

12:13:28 8 A. It is used as a diagnostic  
12:13:30 9 tool. I'm not sure I would say  
12:13:31 10 primarily. The way we use it is to  
12:13:35 11 very carefully define the question that  
12:13:38 12 we're asking. So sometimes we need  
12:13:42 13 precision, reproducibility in the tenth  
12:13:47 14 of the delta place and sometimes we  
12:13:52 15 don't need precision any better than 10  
12:13:56 16 delta units. There are experiments in  
12:13:57 17 which that's the case as well.

12:13:59 18 And so we tailor our quality  
12:14:02 19 control and our processing systems to  
12:14:07 20 the question that we're asking.

12:14:11 21 Q. So your testimony is that  
12:14:13 22 you use it as a diagnostic tool and,  
12:14:16 23 and when -- on occasion, or at least  
12:14:20 24 part of the time you use it as a  
12:14:21 25 diagnostic tool, correct?

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12:14:22 2 A. Absolutely.

12:14:23 3 Q. And when you use it as a  
12:14:24 4 diagnostic tool, do you go on and then  
12:14:27 5 declare the results that have been  
12:14:29 6 changed as the final isotopic value?

12:14:32 7 A. Well, we might. I mean if  
12:14:35 8 the -- if the result is -- if the  
12:14:39 9 original result is minus 30.5 per mil  
12:14:43 10 and an adjustment makes it minus 30.6  
12:14:47 11 per mil and the question we're asking  
12:14:52 12 doesn't require any better precision  
12:14:55 13 than one per mil then I suppose it  
12:14:58 14 wouldn't make any difference.

12:14:59 15 Q. I see. So you would only go  
12:15:01 16 on and declare that final value if the  
12:15:03 17 change in the isotopic value would not  
12:15:05 18 be significant enough for whatever  
12:15:08 19 purpose that the instrument was being  
12:15:11 20 used for, correct?

12:15:11 21 A. I think that's fair.

12:15:24 22 Q. Let me turn your attention  
12:15:25 23 to these charts again. And you're  
12:15:26 24 familiar with them, correct?

12:15:27 25 A. I think so, yes.



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12:15:28 2 Q. And you recognize that the  
12:15:30 3 rectangle at the top is the 995474 A  
12:15:34 4 sample, B sample and the four values  
12:15:36 5 underneath those are the values related  
12:15:38 6 to the isotopic -- excuse me, the  
12:15:41 7 testosterone metabolites, and that if  
12:15:43 8 we go across the horizontal axis of the  
12:15:48 9 chart you will see original result  
12:15:50 10 which was obtained by manual  
12:15:53 11 processing, auto, which is the  
12:15:54 12 automatic feature, the manual which is  
12:15:56 13 the same process that was used to  
12:16:00 14 obtain the original result, zero which  
12:16:02 15 is turning off the automatic background  
12:16:04 16 subtraction under MassLynx, correct?

12:16:08 17 A. Yes.

12:16:09 18 MR. RIVKIN: Just so the  
12:16:10 19 record is clear, the charts we're  
12:16:12 20 looking at, would somebody describe  
12:16:14 21 what the chart is we're looking at.

12:16:16 22 MR. SUH: Sure. It is the  
12:16:17 23 chart records the -- which summarizes  
12:16:20 24 the delta/delta values of the  
12:16:22 25 reprocessing that was done as part of

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12:16:25 2 this case.

12:16:26 3 MR. RIVKIN: Thank you.

12:16:31 4 Q. All right. Now, if you  
12:16:33 5 could compare -- and the same is true  
12:16:36 6 of course of the bottom rectangle which  
12:16:38 7 is the blanks, the blank urines for A  
12:16:41 8 and B.

12:16:44 9 MR. SUH: And Todd, if you  
12:16:45 10 could highlight the column on the  
12:16:48 11 original result in both the top -- well  
12:16:50 12 let's just start with the top box and  
12:16:52 13 the similar process that was used in  
12:16:54 14 the manual column. There you go.

12:17:01 15 Q. Now, Dr. Brenna, you're  
12:17:03 16 familiar with the fact that the values  
12:17:05 17 using the same processing technique  
12:17:10 18 vary, correct, the delta/delta value?

12:17:14 19 A. I think I testified in the  
12:17:15 20 first -- in Malibu that most of them  
12:17:20 21 don't vary, so.

12:17:25 22 Q. For example, in the B, and  
12:17:27 23 the E 11 minus ketoetio, that goes from  
12:17:31 24 minus 2.02 to minus 0.35?

12:17:35 25 A. I said most.

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12:17:36 2 Q. And the andro at 3.51 to  
12:17:40 3 minus 1.61 and the 5-beta that goes  
12:17:42 4 from 2.65 to minus 3.05, right, and the  
12:17:49 5 5-alpha that goes from 6.39, minus 6.39  
12:17:53 6 to minus 7.19. Do you see that?

12:17:55 7 A. Yes.

12:17:56 8 Q. It's fair to say that they  
12:18:00 9 all vary, correct?

12:18:01 10 A. No.

12:18:01 11 Q. You don't find that they all  
12:18:02 12 vary?

12:18:03 13 A. No, I don't.

12:18:03 14 Q. You don't think --

12:18:05 15 A. Not in a nontrivial way they  
12:18:07 16 don't vary.

12:18:07 17 Q. And some of them vary in a  
12:18:09 18 nontrivial way and some of them do?

12:18:11 19 A. I agree.

12:18:12 20 Q. If you were to obtain these  
12:18:13 21 results, and by these results I mean  
12:18:15 22 with respect to all the testosterone  
12:18:18 23 metabolites in the B sample, in an  
12:18:22 24 experiment being run, or tests being  
12:18:24 25 run in your laboratory using your

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12:18:26 2 computer algorithm, would it cause you  
12:18:29 3 any concern?

12:18:29 4 A. Yes.

12:18:32 5 Q. And turning to the A sample  
12:18:41 6 at the top, to the variations between  
12:18:43 7 minus 2.58 to minus 2.32, to minus 3.99  
12:18:48 8 to minus 3.65 to minus 2.15 to minus  
12:18:55 9 2.65, to minus 6.14 to minus 6.95.

12:18:59 10 A. Sorry, you lost me after  
12:19:01 11 minus 2.58. You want me to follow you?

12:19:05 12 Q. Yes.

12:19:06 13 A. Okay, got it.

12:19:15 14 Q. You see those values are  
12:19:16 15 also varying, correct?

12:19:18 16 A. The digits are varying.

12:19:24 17 Q. The values are varying, the  
12:19:26 18 delta/delta values are varying; isn't  
12:19:28 19 that correct? You can't even say that,  
12:19:30 20 Dr. Brennan, that the numbers are  
12:19:31 21 changing?

12:19:32 22 A. I mean it depends what you  
12:19:33 23 mean. I can see it. You can see the  
12:19:35 24 digits are not the same. You called  
12:19:37 25 them out and they're not the same. But

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12:19:38 2 the question that a person with  
12:19:41 3 experience must answer is whether they  
12:19:43 4 change in a nontrivial way and I was  
12:19:46 5 understanding your question as to  
12:19:48 6 whether they vary in a nontrivial way.

12:19:51 7 Q. If you saw those results in an  
12:19:54 8 experiment being run in your laboratory  
12:19:56 9 would they cause you concern?

12:19:58 10 A. Again, yes.

12:20:01 11 Q. Let's go down to the blank  
12:20:07 12 --

12:20:08 13 THE PRESIDENT: Excuse me,  
12:20:09 14 could you just explain what you mean by  
12:20:11 15 concern so that we can fully understand  
12:20:14 16 the answer. It's a very general  
12:20:16 17 concept.

12:20:17 18 Q. What would you do, Dr.  
12:20:19 19 Brenna, if you saw these results in an  
12:20:26 20 experiment run in your laboratory?

12:20:27 21 A. I'd go back and look at the  
12:20:29 22 chromatograms carefully and I'd look at  
12:20:35 23 resolution and baseline which is what  
12:20:38 24 I've done in this case, and I would try  
12:20:41 25 to understand whether some of the

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12:20:46 2 variations, most of them don't concern  
12:20:47 3 me very much, but whether some of the  
12:20:49 4 variations are important or whether,  
12:20:52 5 for instance, in one case or another  
12:20:55 6 that a reference value has changed  
12:21:03 7 which has a result of changing more  
12:21:08 8 than one delta/delta for instance, and  
12:21:11 9 that's what I mean by concern. I would  
12:21:13 10 look back carefully and answer that  
12:21:16 11 question for myself.

12:21:17 12 Q. And would that include the  
12:21:20 13 examination of the resolution of the  
12:21:21 14 chromatograms?

12:21:23 15 A. Yes.

12:21:24 16 Q. And would it include the  
12:21:25 17 calculation of the background of the  
12:21:27 18 chromatograms?

12:21:28 19 A. Yes.

12:21:29 20 Q. Now, in this case --

12:21:31 21 MR. RIVKIN: I'm sorry, and  
12:21:32 22 Dr. Brenna, exactly which changes, which  
12:21:35 23 variations of the eight that have been  
12:21:38 24 underlined would cause you to do that?

12:21:42 25 THE WITNESS: The B sample E

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12:21:47 2 minus 11 keto. I would look at the  
12:21:54 3 andro minus 11 keto. At least in that  
12:22:05 4 box those are the ones that concern me  
12:22:08 5 the most.

12:22:09 6 MR. RIVKIN: You said the A  
12:22:11 7 sample would also cause you concern.  
12:22:13 8 So which are the results that would --  
12:22:19 9 which of the A sample results would  
12:22:21 10 cause you to look at them again?

12:22:23 11 THE WITNESS: I was really  
12:22:24 12 looking at the whole box when I said  
12:22:26 13 that, so I probably shouldn't have said  
12:22:28 14 A sample. It's the B sample that I  
12:22:31 15 would be a little more concerned with.  
12:22:33 16 I mean the worst one on the A is  
12:22:35 17 5-alpha minus Pd1ol.

12:22:39 18 MR. RIVKIN: And would that  
12:22:40 19 variation be enough in your lab to make  
12:22:41 20 you go back to look at --

12:22:45 21 THE WITNESS: To be honest,  
12:22:46 22 sir, I look at most of the chromatograms  
12:22:49 23 regardless. I might look a little more  
12:22:51 24 carefully in these cases. It might cause  
12:22:53 25 me to go back and rerun them. These were

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12:22:55 2 rerun.

12:22:57 3 MR. RIVKIN: Thank you.

12:23:02 4 Q. Dr. Brenna, of course the  
12:23:05 5 amount of concern that is generated is  
12:23:09 6 directly related to the determination  
12:23:13 7 of the isotopic value that is at issue,  
12:23:16 8 correct? In other words, let's take  
12:23:21 9 say hypothetically that the minus --  
12:23:23 10 the delta/delta value in order to  
12:23:24 11 declare an adverse analytic finding in  
12:23:28 12 this case were minus 1,000, fair to say  
12:23:31 13 that none of these changes would cause  
12:23:33 14 you concern because relative to the  
12:23:35 15 final delta/delta value they are  
12:23:38 16 minimal, correct?

12:23:40 17 A. Correct.

12:23:40 18 Q. And that if the delta/delta  
12:23:44 19 value necessary to declare an adverse  
12:23:50 20 analytic finding were minus 1.0 your  
12:23:59 21 concern would increase because the  
12:24:00 22 relative changes between the two  
12:24:01 23 results would be proportionately much  
12:24:06 24 greater, correct?

12:24:07 25 A. Yes. But I would very much



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12:24:12 2 question how such a criteria would be  
12:24:16 3 set and that would be part of my  
12:24:18 4 thinking which is why I'm adding this  
12:24:21 5 point.

12:24:21 6 Q. When you say you would  
12:24:23 7 question the criteria by which that was  
12:24:25 8 set, do you mean the positivity  
12:24:26 9 criteria itself?

12:24:27 10 A. Yes.

12:24:27 11 Q. And did you ask how the  
12:24:30 12 positivity criteria was set in this  
12:24:32 13 case?

12:24:32 14 A. I don't know how it was set  
12:24:43 15 by WADA. Certainly I don't know it in  
12:24:47 16 enough detail to be able to testify  
12:24:49 17 about it. And relative to the sort of  
12:24:59 18 precision that one can expect and does  
12:25:01 19 expect in samples of this type, I  
12:25:07 20 thought that a 3 per mil plus .8 as a  
12:25:11 21 margin of error seemed quite  
12:25:13 22 reasonable.

12:25:13 23 Q. Did you see any validation  
12:25:16 24 studies that had been conducted by LNDD  
12:25:19 25 with respect to the minus 3?

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12:25:22 2 A. I didn't expect to see any  
12:25:23 3 and no, I didn't.

12:25:24 4 Q. Did you see any validation  
12:25:26 5 studies for the minus .8 measurement of  
12:25:29 6 error?

12:25:30 7 A. I did not.

12:25:33 8 Q. So sitting here today you  
12:25:39 9 don't know whether or not LNDD actually  
12:25:43 10 even conducted validation studies with  
12:25:46 11 respect to their minus 3.0?

12:25:49 12 A. From the perspective that I  
12:25:50 13 haven't seen any data, I don't know.  
12:25:54 14 But -- sorry, I'm sorry, I jumped the  
12:25:56 15 gun on that. Relative to the 3.0?

12:26:00 16 Q. Yes.

12:26:00 17 A. The answer to that is no  
12:26:05 18 also.

12:26:06 19 Q. Let me ask you this: If  
12:26:08 20 LNDD had not conducted a validation  
12:26:10 21 study with respect to their ability --  
12:26:14 22 with respect to the minus 3.0  
12:26:19 23 positivity criteria, would that -- and  
12:26:26 24 I'll follow up with a definition of  
12:26:28 25 concern -- cause you any concern?

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12:26:31 2 A. No, it's -- in fact, it's a  
12:26:34 3 -- it's common that novices to  
12:26:39 4 particularly this field seem to think  
12:26:40 5 that every laboratory has to conduct a  
12:26:42 6 validation study for such things and  
12:26:45 7 that's not the case.

12:26:46 8 Q. So your testimony is that  
12:26:52 9 LNDD would not have and should not have  
12:26:54 10 needed to conduct a validation study  
12:26:56 11 for the positivity criteria in this  
12:26:59 12 case?

12:26:59 13 A. For the minus 3, that is my  
12:27:03 14 testimony.

12:27:03 15 Q. And actually it sounds like  
12:27:06 16 for any of the positivity criteria in  
12:27:08 17 this case?

12:27:15 18 A. I'm not going to comment on  
12:27:16 19 any. I'm talking about this particular  
12:27:18 20 thing before me.

12:27:18 21 Q. Well let me ask you with  
12:27:21 22 respect to some of the other positivity  
12:27:25 23 criteria that LNDD applies. For  
12:27:28 24 example, the fact that they analyze,  
12:27:32 25 look at four, all four testosterone

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12:27:34 2 metabolites yet declare an adverse  
12:27:39 3 analytic finding if only one of those  
12:27:41 4 metabolites is out of the minus 3.0  
12:27:45 5 standard, is it your opinion that LNDD  
12:27:50 6 would not have to conduct a validation  
12:27:53 7 study with respect to that component of  
12:27:57 8 the positivity criteria?

12:27:58 9 A. Yes.

12:27:58 10 Q. Is it also your testimony  
12:28:00 11 that they would not have to conduct a  
12:28:04 12 validation study with respect to their  
12:28:06 13 minus .8 positivity criteria?

12:28:10 14 MR. YOUNG: Objection.

12:28:14 15 That's a mischaracterization of what  
12:28:17 16 the 0.8 is. That's been described as a  
12:28:24 17 measure of uncertainty throughout this  
12:28:26 18 hearing not a positivity factor.

12:28:30 19 Q. Certainly, Dr. Brenna, you  
12:28:32 20 would agree with me that a measurement  
12:28:34 21 of uncertainty is related to positivity  
12:28:36 22 criteria?

12:28:40 23 A. I wouldn't certainly agree  
12:28:41 24 with that. I'm not sure exactly what  
12:28:44 25 you mean by it.

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12:28:45 2 Q. Let me ask you a question  
12:28:49 3 this way. To the extent that the .8  
12:28:52 4 figure is an integral part of  
12:28:57 5 determining whether or not the  
12:28:59 6 laboratory is able to declare an  
12:29:02 7 adverse analytic finding off of a  
12:29:05 8 measured delta/delta value, is that --  
12:29:11 9 would you consider that to be part of  
12:29:12 10 the positivity criteria of LNDD?

12:29:16 11 A. As I understand it it is  
12:29:22 12 part of their positivity criteria.

12:29:24 13 Q. So the question is this  
12:29:26 14 then. Do you believe that they should  
12:29:31 15 have to, LNDD should have to conduct a  
12:29:33 16 validation study with respect to the .8  
12:29:36 17 measurement of uncertainty?

12:29:37 18 A. The .8, I would expect that  
12:29:40 19 that would be the case at some point.

12:29:45 20 Q. What about do you believe  
12:29:51 21 that -- well let me ask you this  
12:29:53 22 question. Are you aware that LNDD has  
12:29:56 23 determined that if only three of their  
12:29:59 24 four controls in their Mix Cal Acetate  
12:30:03 25 are within the measurement -- within

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12:30:06 2 the measurement of uncertainty of the  
12:30:08 3 determined isotopic value that that is  
12:30:12 4 sufficient to establish a quality  
12:30:15 5 control in the Mix Cal Acetate?

12:30:17 6 A. Yes.

12:30:17 7 Q. And do you believe that LNDD  
12:30:20 8 must conduct a validation study with  
12:30:24 9 respect to the three out of four  
12:30:28 10 requirement?

12:30:30 11 A. There must be some basis for  
12:30:32 12 it.

12:30:33 13 Q. And when you say there must  
12:30:34 14 be some basis for it, do you mean there  
12:30:37 15 must be a validation study?

12:30:41 16 A. I'm hedging a little bit,  
12:30:45 17 but I think validation study is  
12:30:47 18 probably a reasonable way to  
12:30:48 19 characterize it. It should be part of  
12:30:49 20 the accreditation, I would think. But  
12:30:51 21 I'm not an expert on accreditation as I  
12:30:53 22 noted.

12:30:54 23 Q. Let me ask you this  
12:31:01 24 question, Dr. Brenna. Have you seen in  
12:31:03 25 any of the documents you've been

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12:31:04 2 provided information related to the  
12:31:10 3 identification of the metabolites in  
12:31:12 4 the blank urine?

12:31:14 5 A. Yes.

12:31:27 6 Q. Okay. Can you point to  
12:31:29 7 those documents?

12:31:33 8 A. Give me a second. There's a  
12:32:12 9 series of measurements that start at  
12:32:17 10 USADA 130 in doc pack A and I see blank  
12:32:22 11 -- sorry, blank urine fraction 1 on  
12:32:27 12 USADA 132 and 133 and then sample  
12:32:35 13 995474 which you didn't ask me about  
12:32:38 14 that, and I see blank urine F2 on USADA  
12:32:44 15 136, 137, and fraction 3 -- that's  
12:32:52 16 fraction 2. They must have repeated  
12:32:55 17 it. Well, I won't go through it, but  
12:32:57 18 there are data.

12:32:58 19 Q. Let me ask you this. I'm  
12:33:00 20 talking about the pool of -- blank urine  
12:33:03 21 pool 4. Do you see identification  
12:33:08 22 information about the blank urine pool F  
12:33:15 23 4?

12:33:18 24 A. Well, I guess I don't. I  
12:33:20 25 didn't make a specific note of that. I

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12:33:23 2 assume that if they did blank urine --  
12:33:30 3 if I saw a blank urine analyses that  
12:33:33 4 that would be the practice for it.

12:33:35 5 Q. And you understand my  
12:33:36 6 question, right? I may be asking it in  
12:33:39 7 an overly general way, which is I'm  
12:33:41 8 asking for the information that would  
12:33:44 9 lead -- that would enable the viewer to  
12:33:48 10 identify the metabolites in the blank  
12:33:53 11 urine pool F 4?

12:33:54 12 A. That's the way I interpreted  
12:34:02 13 it.

12:34:11 14 MR. SUH: No further  
12:34:12 15 questions.

12:34:13 16 THE PRESIDENT: Mr. Young.  
12:34:21 17 Actually we're going to take a one  
12:34:23 18 minute break before we do that.

12:34:25 19 (A recess was taken.)

12:42:26 20 THE PRESIDENT: Mr. Suh,  
12:42:33 21 would you just like to put into the  
12:42:35 22 record what you told us about Mr.  
12:42:38 23 Petty, please.

12:42:39 24 MR. SUH: Yes. That we will  
12:42:41 25 not call Mr. Petty for cross examination.



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12:42:52 2 THE PRESIDENT: So that  
12:42:53 3 leaves Dr. Matthews and Dr. Jumeau for  
12:42:56 4 today; is that right?

12:42:59 5 MR. SUH: Correct.

12:43:00 6 THE PRESIDENT: Now, Mr.  
12:43:01 7 Young, just before you go back on your  
12:43:03 8 reexamination do you mind us asking how  
12:43:05 9 long it might take because we're  
12:43:06 10 starting to think it might be, now that  
12:43:08 11 Mr. Petty is not going to be  
12:43:11 12 questioned, it might be perfect to take  
12:43:12 13 the lunch break. Can you give us an  
12:43:14 14 indication?

12:43:16 15 MR. YOUNG: It's going to  
12:43:17 16 take quite awhile.

12:43:23 17 THE PRESIDENT: I think  
12:43:24 18 we'll take the lunch break for one hour  
12:43:26 19 then. We'll return here at quarter to  
12:43:28 20 two.

12:43:35 21 MS. SLOAN: Sorry, can we  
12:43:36 22 just clarify that the panel doesn't  
12:43:37 23 have any questions for Mr. Petty?

12:43:39 24 THE PRESIDENT: Yes, that is  
12:43:40 25 the case.

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12:43:41 2 MS. SLOAN: So we can let  
12:43:43 3 him know he doesn't need to be here.

12:43:45 4 THE PRESIDENT: Yes, you  
12:43:47 5 can. Thank you very much. The same  
12:43:48 6 applies for Dr. Shackelton and  
12:43:51 7 Dr. Clark. We have reread their  
12:43:53 8 declarations and we would not have any  
12:43:55 9 questions for them.

12:43:56 10 MR. YOUNG: I thank you and  
12:43:58 11 I'm sure they thank you.

12:44:43 12 (Lunch recess: 12:44 p.m.)

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12:44:43 2 A F T E R N O O N S E S S I O N

13:53:18 3 1:53 p.m.

13:53:18 4 THE PRESIDENT: Mr. Young,

13:53:47 5 just before you start, the panel has

13:53:51 6 discussed the proposal about additional

13:53:55 7 hours being added and we're not

13:53:58 8 questioning it in any way, but we want

13:54:00 9 to just have another review at the end

13:54:02 10 of today and see what it looks like.

13:54:08 11 You can now proceed with

13:54:09 12 your reexamination, please.

13 J. T H O M A S B R E N N A,

14 resumed, having been previously duly

15 affirmed, was examined and testified

16 further as follows:

17 REDIRECT EXAMINATION

13:54:20 18 BY MR. YOUNG:

13:54:20 19 Q. Dr. Brenna, you were

13:54:22 20 questioned about a grant that Cornell

13:54:26 21 University had received from USADA?

13:54:29 22 A. Yes.

13:54:30 23 Q. What was the timing of when

13:54:36 24 that grant was approved?

13:54:37 25 A. It was approved or received

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13:54:47 2 January 2006 I believe.

13:54:52 3 Q. So before Mr. Landis ever  
13:54:54 4 rode in the Tour de France?

13:54:55 5 A. Yes.

13:54:57 6 Q. And d'Espagne?

13:55:00 7 A. I believe so.

13:55:01 8 Q. And are USADA employees  
13:55:05 9 involved in the review of that grant?

13:55:08 10 A. I'm sorry, what -- in what  
13:55:14 11 sense in the review?

13:55:15 12 Q. Is the grant subject to any  
13:55:19 13 ongoing review?

13:55:21 14 A. I submit annual progress  
13:55:24 15 reports to the USADA.

13:55:24 16 Q. And do you submit that to a  
13:55:28 17 USADA research committee or do you  
13:55:31 18 submit that to Larry Bowers for his  
13:55:34 19 review?

13:55:35 20 A. I submit it to Larry Bowers.

13:55:37 21 Q. And do you know what he does  
13:55:39 22 with it?

13:55:39 23 A. Not entirely, no.

13:55:40 24 Q. Okay. You talked about a  
13:55:48 25 WADA grant that was withdrawn. Why did

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13:55:53 2 that happen?

13:55:56 3 A. There was a nascent  
13:55:59 4 collaboration between myself and Dr.  
13:56:03 5 Meier-Augenstein who was a witness for  
13:56:06 6 Mr. Landis in the Malibu hearing, and  
13:56:12 7 of course neither one of us knew that  
13:56:13 8 we were participating on opposite  
13:56:17 9 sides, and when that came to light we  
13:56:19 10 had to drop it.

13:56:26 11 MR. YOUNG: Could we put up  
13:56:28 12 the fraction 3 chromatograms of the  
13:56:34 13 IRMS for the A and B samples.

13:56:45 14 MS. SLOAN: That's Exhibit  
13:56:46 15 24 for USADA 173 and Exhibit 25 for  
13:56:54 16 USADA 349.

13:57:02 17 Q. And Dr. Brenna, can you  
13:57:06 18 identify for us the 5-alpha and PdIol  
13:57:14 19 peaks that are the basis of the adverse  
13:57:18 20 analytical finding?

13:57:20 21 A. Yes, I can. I guess I'll  
13:57:31 22 point this way. I can't see them very  
13:57:33 23 well over there, but that week which I  
13:57:39 24 believe reads minus 32.12 is the AdIol.

13:57:45 25 MR. YOUNG: And can we

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13:57:46 2 highlight that, please.

13:57:55 3 A. And the Pdiol ERC, exogenous  
13:57:59 4 reference compound is there.

13:58:05 5 MR. YOUNG: And can we  
13:58:07 6 highlight that, please.

13:58:08 7 Q. Could you identify the Adiol  
13:58:10 8 in the B chromatogram?

13:58:12 9 A. The one labeled minus 31.88.  
13:58:25 10 And Pdiol is minus 26.16.

13:58:32 11 Q. Now, we heard Dr. Davis this  
13:58:35 12 morning talk about how poor the  
13:58:41 13 chromatograms were and how with such  
13:58:48 14 poor chromatograms it didn't matter how  
13:58:54 15 the raw data was reprocessed.

13:58:57 16 MR. SUH: Mr. Chair, I would  
13:58:59 17 object. This is outside the scope of  
13:59:00 18 our cross examination.

13:59:03 19 THE PRESIDENT: Yes, but the  
13:59:07 20 tribunal recalled Dr. Davis and it's a  
13:59:12 21 matter of real interest. So we will  
13:59:16 22 allow the questioning in the hope that  
13:59:18 23 we will be better informed.

13:59:20 24 MR. SUH: Thank you.

13:59:24 25 Q. So that's what he said. Do

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13:59:29 2 you think that in the area of interest  
13:59:34 3 here around the 5-alpha diol and Pdiol  
13:59:39 4 that's poor chromatography?

13:59:41 5 A. No, I think the  
13:59:43 6 chromatography is perfectly suitable  
13:59:46 7 for the purpose of determining isotope  
13:59:51 8 ratios.

13:59:55 9 Q. Some of the things that were  
14:00:01 10 pointed out were problems such as  
14:00:03 11 sloping baseline. Would you consider  
14:00:09 12 that in either of those chromatograms  
14:00:11 13 between the 5-alpha and the Pdiol  
14:00:14 14 there's a sloping baseline that would  
14:00:18 15 adversely affect the delta values?

14:00:20 16 A. No.

14:00:21 17 Q. And why not?

14:00:22 18 A. Well, sloping baselines can  
14:00:31 19 have an influence on isotope ratios if  
14:00:35 20 there is perhaps a major slope to them.  
14:00:38 21 I don't see a major slope to these  
14:00:41 22 baselines. And also, in this region,  
14:00:53 23 in the region around the Adiol there  
14:00:55 24 isn't much slope at all actually,  
14:00:57 25 certainly none around the -- not very

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14:00:59 2 much around the Pdiol. So I don't see  
14:01:03 3 that as a significant problem. I don't  
14:01:07 4 see that as a problem at all.

14:01:09 5 Q. In response to a question  
14:01:11 6 from the panel Dr. Davis said that how  
14:01:22 7 the background is integrated in manual  
14:01:28 8 integration could have a very large  
14:01:33 9 impact on the delta values. What do  
14:01:37 10 these chromatograms tell you about  
14:01:39 11 that?

14:01:43 12 A. Well, these chromatograms as  
14:01:46 13 well as a consideration of the ratio  
14:01:48 14 traces indicate to me that the  
14:01:51 15 background was accounted for in a  
14:01:57 16 proper way, and that the isotope ratios  
14:02:02 17 are accurate.

14:02:04 18 Q. And in the reprocessing --  
14:02:10 19 first, is this a lot of background in  
14:02:12 20 this area of interest?

14:02:14 21 A. Not really.

14:02:17 22 Q. And in the reprocessing what  
14:02:22 23 was the effect on the 5-alpha Pdiol  
14:02:27 24 when all of that background was  
14:02:32 25 included in the delta values?



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14:02:35 2 A. The adverse analytical  
14:02:37 3 finding was maintained. That would  
14:02:41 4 have been shown in the matrix that I  
14:02:46 5 was shown, and one of those columns  
14:02:50 6 said no background correction. And so  
14:02:53 7 in that analysis the entire background  
14:02:56 8 underneath the peaks was included in  
14:03:00 9 the integration.

14:03:02 10 Now that's not a procedure  
14:03:03 11 that any practitioner in this field  
14:03:07 12 would approve of as a final -- as a  
14:03:12 13 procedure for calculating isotope  
14:03:15 14 ratios. But if one includes that  
14:03:19 15 entire background, the delta value went  
14:03:21 16 to something like minus 5.9, I don't  
14:03:24 17 remember the exact number, and was  
14:03:26 18 therefore still quite positive for an  
14:03:33 19 adverse analytical finding.

14:03:34 20 Q. And one of the arguments  
14:03:36 21 that's been put forward about the  
14:03:39 22 manual integration of background is  
14:03:44 23 premised on the theoretical possibility  
14:03:50 24 that this background might have had a  
14:03:56 25 very, very, very low delta value so

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14:04:00 2 improperly including any part of it  
14:04:02 3 could influence the delta values of the  
14:04:05 4 peaks. Do you have an opinion on that?

14:04:07 5 A. Well I think the zero  
14:04:11 6 background analysis puts that to rest.

14:04:23 7 Q. And I'm going to go back to  
14:04:24 8 this, but could we put up GDC 1350, and  
14:04:35 9 could you show the panel where the zero  
14:04:37 10 background is?

14:04:42 11 A. Right here, in this column,  
14:04:45 12 and I was mistaken. It went from minus  
14:04:52 13 6.14 to minus 5.55 in the A, and in the  
14:05:02 14 B it went to minus 5.58. I said minus  
14:05:06 15 5.59 a moment ago.

14:05:11 16 Q. So as I'm looking at this,  
14:05:12 17 is it right that by including the  
14:05:15 18 background --

14:05:18 19 THE PRESIDENT: Mr. Young,  
14:05:19 20 you better open the question up and not  
14:05:22 21 make it a leading question.

14:05:24 22 MR. YOUNG: Thank you.

14:05:27 23 Q. By including the background  
14:05:32 24 does it make the -- is the effect of  
14:05:38 25 including the background to cause the

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14:05:41 2 delta value to be --

14:05:44 3 THE PRESIDENT: What is the  
14:05:45 4 effect.

14:05:46 5 MR. YOUNG: I'll just go  
14:05:49 6 straight.

14:05:49 7 Q. What is the effect of  
14:05:50 8 including the background compared to  
14:05:52 9 the original result?

14:05:53 10 A. It seemed to move the  
14:05:54 11 difference to a little bit smaller  
14:06:00 12 magnitude, but it didn't change the  
14:06:02 13 adverse analytical finding. I hope  
14:06:07 14 that's responsive to your question.

14:06:08 15 Q. Does it make it a more  
14:06:09 16 positive test or a less positive test?  
14:06:14 17 It's positive either way?

14:06:16 18 A. It's positive either way. I  
14:06:18 19 would say it makes it a slightly less  
14:06:20 20 positive test, but it's still very  
14:06:23 21 positive.

14:06:23 22 Q. And would that suggest to  
14:06:25 23 you that the background has --

14:06:32 24 THE PRESIDENT: What does  
14:06:33 25 that suggest to you.

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14:06:35 2 MR. YOUNG: Thank you.

14:06:37 3 Q. What does that suggest to  
14:06:38 4 you?

14:06:38 5 A. Sorry. What -- it suggests  
14:06:42 6 to me that the background did not  
14:06:45 7 significantly alter the isotope ratios  
14:06:50 8 in these other calculations.

14:06:55 9 MR. RIVKIN: Mr. Young, are  
14:06:57 10 you going to come back to this chart?

14:07:00 11 MR. YOUNG: Yes, I am.

14:07:01 12 MR. RIVKIN: Then I'll save  
14:07:03 13 my questions.

14:07:06 14 MR. YOUNG: Could we go back  
14:07:07 15 to the fraction 3s.

14:07:09 16 MS. SLOAN: For the record,  
14:07:10 17 this is USADA 173 which is in Exhibit  
14:07:13 18 24 and USADA 349 which is in Exhibit  
14:07:16 19 25.

14:07:31 20 Q. In examining the relevant  
14:07:33 21 parts of this chromatogram, have you  
14:07:37 22 seen evidence of peak co-elution?

14:07:46 23 A. If I look very, very  
14:07:48 24 carefully I see some peak co-elution.  
14:07:52 25 I certainly see some in the region of

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14:07:55 2 the internal standard. There also may  
14:08:04 3 be a little bit of peak co-elution with  
14:08:06 4 the 5-beta, but I don't regard that as  
14:08:10 5 significant in my careful look at the  
14:08:11 6 data.

14:08:12 7 Q. When you looked carefully at  
14:08:13 8 the data, did you see any evidence that  
14:08:18 9 the 5-alpha value was affected by peak  
14:08:23 10 co-elution?

14:08:23 11 A. No. And I looked very  
14:08:26 12 closely at that.

14:08:27 13 Q. And how did you do that?

14:08:28 14 A. Well, besides blowing these  
14:08:33 15 regions up so that I could see them a  
14:08:36 16 little bit better, and we did that for  
14:08:38 17 the B at the reanalysis that took place  
14:08:42 18 in May, I also looked carefully at the  
14:08:47 19 ratio trace, the two to one ratio  
14:08:51 20 trace, and as I said in Malibu, I see  
14:08:58 21 baseline noise on both sides of that  
14:09:02 22 5-alpha diol in the ratio trace and  
14:09:06 23 that tells me it's resolved.

14:09:08 24 Q. What's your conclusion as to  
14:09:21 25 reliability of the values arrived at by

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14:09:24 2 LNDD for the 5-alpha and Pd101?

14:09:30 3 A. My conclusion is that the  
14:09:40 4 values are of acceptable professional  
14:09:44 5 standards and quite reliable.

14:09:51 6 Q. This morning Mr. Suh asked  
14:09:54 7 you a number of questions about the  
14:10:01 8 internal standard. Can I ask you to  
14:10:04 9 take a look at Page USADA 353.

14:10:08 10 MS. SLOAN: That will be in  
14:10:10 11 Exhibit 25.

14:10:34 12 Q. And I direct your attention  
14:10:36 13 to the second line from the bottom. Do  
14:10:50 14 you have an understanding of that or  
14:10:52 15 should we impose on Mr. Reeb or Mr.  
14:10:56 16 Paulsson to translate it for us?

14:10:58 17 A. Why don't we translate it.

14:11:01 18 MR. PAULSSON: Who do you  
14:11:02 19 want?

14:11:04 20 MR. YOUNG: You can do it.

14:11:04 21 MR. PAULSSON: The  
14:11:06 22 specification, type of -- what is an  
14:11:13 23 alkane?

14:11:14 24 THE WITNESS: Alkane is  
14:11:15 25 fine.

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14:11:16 2 MR. PAULSSON: Type of  
14:11:17 3 deviation of at least 3 alkanes plus or  
14:11:21 4 minus 0.5 percent.

14:11:26 5 THE WITNESS: Per mil.

14:11:28 6 MR. PAULSSON: Oh, yes,  
14:11:29 7 sorry.

14:11:32 8 Q. Have you seen any criteria  
14:11:41 9 like this that applies to the delta  
14:11:43 10 value of the internal standard when  
14:11:48 11 used with either a blank urine or the  
14:11:52 12 athlete's sample?

14:11:53 13 A. I don't recall any.

14:12:10 14 MR. YOUNG: Let's go back to  
14:12:11 15 the fraction 3 again.

14:12:13 16 MS. SLOAN: So we're back to  
14:12:15 17 Exhibit 24 for USADA 173 and 25 for  
14:12:17 18 USADA 349.

14:12:28 19 Q. Mr. Suh pointed out that in  
14:12:33 20 three of the either blank urine or  
14:12:38 21 athlete fractions that the value of the  
14:12:46 22 internal standard that had been added  
14:12:47 23 to them was in one case 0.2 and another  
14:12:52 24 case .62 and in another case 1.08  
14:12:58 25 different than the reference value for

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14:13:01 2 that substance. Does that fact cause  
14:13:08 3 you to reconsider your conclusion that  
14:13:15 4 the delta value shown in these  
14:13:18 5 chromatograms are reliable?

14:13:20 6 A. No.

14:13:21 7 Q. Why not?

14:13:22 8 A. Well, I've already said that  
14:13:31 9 I understand those internal standard  
14:13:35 10 values to be used as retention time  
14:13:38 11 markers, but more specifically, in  
14:13:42 12 looking at the chromatograms, most of  
14:13:46 13 them have poor chromatography in the  
14:13:51 14 region of the internal standard and  
14:13:55 15 therefore, I wouldn't expect --  
14:14:00 16 wouldn't expect particularly good delta  
14:14:02 17 values in those regions.

14:14:08 18 Q. And regardless of what  
14:14:09 19 criteria the LNDD had, if you would  
14:14:14 20 have had those results in your lab  
14:14:16 21 would it have caused you to disregard  
14:14:20 22 the values that we have highlighted in  
14:14:23 23 green?

14:14:24 24 A. No.

14:14:30 25 MR. RIVKIN: Would it have



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14:14:31 2 caused you to recalculate in some way?

14:14:34 3 THE WITNESS: Well, I would

14:14:35 4 have looked at this and said that's a

14:14:37 5 mess over there and so we can't rely

14:14:41 6 upon those numbers. And I do that on a

14:14:44 7 fairly regular basis.

14:14:45 8 So as I testified earlier,

14:14:50 9 we routinely look at the isotope ratios

14:14:53 10 and recalculate to establish that they

14:14:58 11 are calculated properly and that they

14:15:01 12 are robust.

14:15:05 13 MR. RIVKIN: So if you were

14:15:08 14 recalculating would you recalculate all

14:15:10 15 of the isotope values in the chromatogram

14:15:14 16 or just the area where you're concerned

14:15:16 17 about the chromatography?

14:15:18 18 THE WITNESS: Well, I

14:15:19 19 wouldn't use the area that I'm

14:15:22 20 concerned about the chromatography. I

14:15:23 21 wouldn't use that. That's unacceptable

14:15:25 22 that chromatography. That's bad

14:15:27 23 chromatography. If I was interested in

14:15:29 24 these numbers, in this number and this

14:15:31 25 number, I would look at the isotope

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14:15:35 2 ratio by recalculating what we've been  
14:15:39 3 calling manual reprocessing which isn't  
14:15:42 4 really manual reprocessing, but anyway,  
14:15:45 5 or by what we call manual integration,  
14:15:47 6 but anyway, to ensure that these are  
14:15:49 7 robust numbers is that responsive?

14:15:55 8 MR. RIVKIN: Yes. So the  
14:15:56 9 chromatography in one part of the  
14:15:58 10 graph, its quality does not affect the  
14:16:01 11 quality of the chromatography in  
14:16:03 12 another part of the graph?

14:16:04 13 THE WITNESS: That's right,  
14:16:05 14 that's right. The chromatography in  
14:16:06 15 one part of the chromatogram is very  
14:16:10 16 poor, but the chromatography in another  
14:16:12 17 part of the chromatogram is acceptable  
14:16:15 18 and that's quite a reasonable way to  
14:16:17 19 approach this sort of analysis.

14:16:19 20 MR. RIVKIN: And in your lab  
14:16:20 21 as long as it's acceptable in the part  
14:16:22 22 that you are looking at you don't care  
14:16:24 23 if it's unacceptable somewhere else?

14:16:26 24 THE WITNESS: Absolutely.

14:16:40 25 Q. Let's talk about peak

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14:16:42 2 identification. The questions put to  
14:16:58 3 you this morning had you talking about  
14:17:01 4 how you understood the people in Paris  
14:17:06 5 identified peaks. I'm going to ask you  
14:17:10 6 a different type of question. Have you  
14:17:15 7 done anything -- well, are you  
14:17:20 8 satisfied that the 5-alpha and Pd1ol  
14:17:25 9 peaks in this chromatograms have been  
14:17:28 10 properly identified?

14:17:29 11 A. Yes, I am.

14:17:30 12 Q. And why are you satisfied?

14:17:38 13 A. I described much of that  
14:17:40 14 this morning, but I'll be glad to  
14:17:43 15 describe it again. The first stage --  
14:17:50 16 I shouldn't say the first stage in the  
14:17:52 17 process, that's what we've been --  
14:17:54 18 that's the nomenclature we've been  
14:17:56 19 using, but I look in the doc pack and I  
14:17:59 20 find GC/MS runs of standards and of  
14:18:06 21 fractions from urine standards and from  
14:18:13 22 the athlete's urine.

14:18:16 23 Now those GC/MS runs result  
14:18:21 24 in mass spectra that unambiguously  
14:18:27 25 identify the analytes in all the

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14:18:33 2 samples, and in the standards. So if  
14:18:36 3 we didn't know the identity of the  
14:18:42 4 steroids in the mixed acetate standard  
14:18:47 5 we could establish that from the mass  
14:18:49 6 spectra and consideration of, for  
14:18:52 7 instance, the mass spectra libraries  
14:18:55 8 which we have on GC/MS instruments. So  
14:18:57 9 we have redundant information with  
14:19:00 10 respect to that.

14:19:01 11 And I was struck this  
14:19:04 12 morning by a comment, if I remember --  
14:19:07 13 if I understood it correctly, that the  
14:19:10 14 observer for the B sample asked for the  
14:19:14 15 mass spectra associated with the  
14:19:16 16 steroids and perhaps it would be  
14:19:17 17 instructive to take a look at the mass  
14:19:20 18 spectra to get a better idea of what I  
14:19:24 19 have in mind.

14:19:26 20 Q. Okay.

14:19:27 21 MS. SLOAN: That's Exhibit  
14:19:29 22 26.

14:19:37 23 A. I think it's LNDD 0333. I  
14:19:39 24 just have some notes on this.

14:19:43 25 MS. SLOAN: So Exhibit 26

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14:19:46 2 LNDD 0333.

14:19:50 3 A. With the curious name C 13.

14:20:01 4 Okay, so if we -- pick a good one here.

14:20:08 5 We can pick any one, but let me pick a

14:20:10 6 relevant one. If you look at LNDD 0337

14:20:21 7 there we have the mass spectra for a

14:20:26 8 peak in mixed acetate and a mass

14:20:31 9 spectrum for a peak in the athlete's

14:20:34 10 urine.

14:20:36 11 Now, the mass spectrum

14:20:40 12 represents pieces of the original

14:20:42 13 molecule. So the original molecule is

14:20:47 14 admitted from the GC column directly

14:20:50 15 into a mass spectrometer and the mass

14:20:53 16 spectrometer breaks it into pieces and

14:20:56 17 detects those pieces and detects how

14:20:58 18 much appear for each one of those

14:21:01 19 pieces. These pieces are

14:21:03 20 characteristic of the structure, the

14:21:09 21 chemical structure of the steroid.

14:21:11 22 And if you look at the top

14:21:18 23 mass spectrum and the bottom mass

14:21:20 24 spectrum I think it's fair to say at

14:21:22 25 least that, even at this distance, that

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14:21:25 2 those patterns are quite similar. In  
14:21:29 3 fact, they are virtually identical.  
14:21:31 4 When I look carefully at them I -- I  
14:21:36 5 even look carefully to make sure that  
14:21:38 6 they were not the same. These are  
14:21:39 7 very, very good spectra, showing that  
14:21:44 8 we've positively identified the 5-beta  
14:21:48 9 in the athlete's urine.

14:21:53 10 The other thing notable  
14:21:55 11 while we have this up, is the absence  
14:21:58 12 of peaks in the bottom spectrum that  
14:22:05 13 are not represented in the bottom  
14:22:07 14 spectrum. If there were a major  
14:22:12 15 interference in the chromatographic  
14:22:15 16 separation of this peak, one might  
14:22:17 17 expect to see -- not might expect to  
14:22:20 18 see, one would expect to see additional  
14:22:22 19 peaks in the bottom that are not  
14:22:24 20 present in the top. But we don't see  
14:22:26 21 that.

14:22:26 22 If we then turn the page to  
14:22:34 23 LNDD 338, we see quite a different  
14:22:40 24 pattern, and this -- we can go through  
14:22:46 25 the same process, we can do this

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14:22:48 2 process for every steroid, and again we  
14:22:51 3 see a pattern of a standard and a  
14:22:54 4 pattern of a sample. Again, mass  
14:23:00 5 spectra.

14:23:01 6 Q. And what are we talking  
14:23:02 7 about? What peak are we talking about?

14:23:04 8 A. This is the 5-alpha.

14:23:06 9 Q. Please continue.

14:23:08 10 A. Yes. And we don't see  
14:23:13 11 evidence of interferences of any major  
14:23:17 12 import in the spectrum. And I only  
14:23:22 13 qualify it by saying there are always  
14:23:24 14 very, very small differences in peaks  
14:23:29 15 -- sorry, in mass spectra.

14:23:31 16 So this is another piece of  
14:23:36 17 the information that tells us that  
14:23:39 18 we've properly identified the peak in  
14:23:41 19 GC/MS.

14:23:44 20 Q. Can we finish before you  
14:23:46 21 leave GC/MS. What is 339?

14:23:53 22 A. Oh, yes, sure. Put up 339.  
14:23:56 23 And if you were looking at the screen  
14:23:58 24 when it changed from one spectrum to  
14:24:01 25 another, that pattern is also different

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14:24:04 2 than the -- than the other two

14:24:07 3 patterns, and that identifies the

14:24:09 4 Pdiol.

14:24:10 5 There's another thing that

14:24:12 6 identifies these peaks. We can take

14:24:16 7 this information and we can plot them

14:24:19 8 as a function of time. These are

14:24:21 9 plotted as a function of mass along the

14:24:23 10 X axis, but we can pick out

14:24:26 11 characteristic pieces of the molecule

14:24:28 12 and we can ask when did they elute from

14:24:30 13 the GC column. That is the information

14:24:34 14 that's contained in the original doc

14:24:36 15 pack.

14:24:36 16 And the three ion criteria

14:24:43 17 which we've heard about from time to

14:24:45 18 time which is considered adequate for

14:24:47 19 identifying the compound is derived

14:24:49 20 from these data, and a consideration of

14:24:52 21 when the three ions actually elute and

14:24:55 22 do they elute at the same time. If

14:24:57 23 they're all coming from the same

14:24:58 24 molecule coming from the GC column they

14:25:02 25 should have the same elution profile



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14:25:04 2 and those data are shown in the  
14:25:07 3 original doc pack.

14:25:10 4 MR. RIVKIN: Sorry, just so  
14:25:11 5 we're clear. When were these done?  
14:25:14 6 They were part of the original  
14:25:15 7 analysis?

14:25:16 8 THE WITNESS: They were part  
14:25:16 9 of the original analysis, yes. And the  
14:25:18 10 data in the doc pack come from these  
14:25:21 11 data. That is the GC/MS data in the  
14:25:28 12 doc pack come from these data.

14:25:29 13 Q. And this was your first step  
14:25:34 14 in -- my question was how are you  
14:25:37 15 comfortable that these were 5-alpha and  
14:25:41 16 Pdial?

14:25:42 17 A. I'm comfortable based on  
14:25:44 18 these mass spectra and I'm comfortable  
14:25:46 19 based on the elution profiles that I  
14:25:48 20 see in the doc packs.

14:25:50 21 Q. And what elution profiles  
14:25:56 22 are you talking about?

14:25:57 23 A. Okay.

14:26:19 24 MS. SLOAN: Which exhibit  
14:26:20 25 are you in? It looks like you're in

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14:26:23 2 Exhibit 24.

14:26:25 3 A. 24, so 130. So starting at  
14:26:31 4 USADA 130 there are a series of pages  
14:26:34 5 that are what I was referring to a  
14:26:39 6 moment ago. The data on USADA 130 show  
14:26:47 7 analysis, GC/MS analysis of the mixed  
14:26:50 8 acetate and the mass spectra I showed  
14:26:54 9 just a moment ago were derived from, at  
14:26:59 10 least the top ones were derived from  
14:27:01 11 the peaks you see in the standard. So  
14:27:05 12 they came from here.

14:27:07 13 And the elution profile, if  
14:27:13 14 you go to the next page, USADA 131, the  
14:27:17 15 elution profiles for the ions that are  
14:27:20 16 characteristic of the various target  
14:27:22 17 analytes, that is the internal standard  
14:27:24 18 and the -- and the steroid metabolites,  
14:27:29 19 are shown on USADA 131. And if you  
14:27:34 20 look at each one of these profiles,  
14:27:39 21 let's pick one that we can sort of see.  
14:27:44 22 Let's say the Pd101, you can see that  
14:27:48 23 there were three -- yes, good. There  
14:27:52 24 are one, two, three ions that come off  
14:27:57 25 with the same profile. You can see

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14:27:59 2 that those peaks are very similar  
14:28:00 3 looking, and they appear in a proper  
14:28:03 4 ratio for these -- for this particular  
14:28:06 5 analyte, and they elute at the expected  
14:28:09 6 time for this steroid, and these data  
14:28:17 7 will be derived from many mass spectra,  
14:28:20 8 one at each point, where we're simply  
14:28:22 9 pulling one mass out and plotting it,  
14:28:24 10 or one, two, three masses out and  
14:28:26 11 plotting it as a function of time.

14:28:27 12 So that is the redundant  
14:28:30 13 information that gives us confidence  
14:28:33 14 that we've properly identified the  
14:28:35 15 steroids. And that was done for the  
14:28:40 16 standard and it was done for each of  
14:28:42 17 the fractions.

14:28:43 18 Q. Including the fraction 3 of  
14:28:50 19 the athlete and fraction 3 of the blank  
14:28:52 20 urine?

14:28:52 21 A. Yes.

14:28:53 22 Q. And then you talked about a  
14:29:05 23 -- and I don't want to use the wrong  
14:29:07 24 words, a comparison of some sort  
14:29:11 25 between the GC/MS and the IRMS?

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14:29:15 2 A. Yes. So the question is how  
14:29:19 3 do we connect retention times in the  
14:29:22 4 GC/MS with retention times in the  
14:29:25 5 GC/C/IRMS. In the GC/C/IRMS a standard  
14:29:33 6 Mix Cal Acetate is run and that  
14:29:37 7 standard contains a subset of four  
14:29:42 8 steroids that are contained also in the  
14:29:45 9 mixed acetate.

14:29:48 10 So these have been properly  
14:29:50 11 identified. It is not necessary to go  
14:29:52 12 back and identify those steroids in the  
14:29:58 13 -- in the Mix Cal Acetate. They've  
14:30:00 14 been properly identified.

14:30:01 15 Q. And can we put the fraction  
14:30:08 16 3s back up again.

14:30:15 17 MS. SLOAN: So we're back in  
14:30:16 18 Exhibit 24 with USADA 173 and 25 with  
14:30:20 19 USADA 149.

14:30:32 20 Q. When you're talking about  
14:30:35 21 steroids that have been identified in  
14:30:38 22 the Mix Cal Acetate, which peaks would  
14:30:45 23 those be?

14:30:46 24 A. Well here would be the  
14:30:49 25 internal standard, the 5-alpha

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14:30:53 2 androstanol AC, and the 5-beta diol.

14:31:01 3 Q. And could we -- could you

14:31:04 4 show Jennefer which is the 5-beta.

14:31:10 5 A. The 5-beta's there.

14:31:12 6 Q. And could we put a blue dot

14:31:15 7 on that. Or do you have other colors?

14:31:30 8 MS. BARTHOLOMEW: Yes, I do.

14:31:44 9 MR. YOUNG: It doesn't

14:31:45 10 matter. I think everybody can follow

14:31:46 11 along. You can put that on the --

14:31:50 12 Q. And the 5-beta in the B

14:31:52 13 sample?

14:31:53 14 A. Is right there. Sorry,

14:31:54 15 right there.

14:32:00 16 Q. So how does the internal

14:32:02 17 standard in the 5-beta that are

14:32:04 18 determined in the Mix Cal Acetate, how

14:32:06 19 does that help you identify the 5-alpha

14:32:10 20 in the Pdial?

14:32:15 21 A. Because the same column was

14:32:16 22 used, the order of elution of the

14:32:20 23 analytes is identical, independent of

14:32:25 24 the temperature program, even though

14:32:27 25 the temperature programs were very

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14:32:29 2 similar, independent of the flow rate,  
14:32:30 3 the flow rates were different. But we  
14:32:35 4 know from our GC/MS analysis that the  
14:32:39 5 5-alpha elutes slightly after the  
14:32:47 6 5-beta. We know it's there because we  
14:32:49 7 identified it. We know the 5-alpha is  
14:32:52 8 in the fraction, that's unequivocally  
14:32:54 9 established by the mass spectra. So  
14:33:01 10 between those two pieces of  
14:33:03 11 information, the only candidate I see  
14:33:05 12 is that peak and that peak, it must be  
14:33:08 13 -- it must be in the spectrum -- sorry,  
14:33:12 14 it must be in the chromatogram  
14:33:14 15 somewhere and those are the two obvious  
14:33:16 16 peaks.

14:33:16 17 Now if one glances at it or  
14:33:18 18 eyeballs it I suppose you could  
14:33:20 19 characterize it, you would guess that.  
14:33:22 20 But if you also calculate it, for  
14:33:24 21 instance, a relative retention time to  
14:33:26 22 the 5-beta, use the 5-beta as a base  
14:33:28 23 and you divide the retention time in  
14:33:31 24 GC/MS now between the 5-alpha and the  
14:33:33 25 5-beta, and then looked at the

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14:33:36 2 retention time of the 5-beta in  
14:33:39 3 GC/C/IRMS, you would get a retention  
14:33:44 4 time for the 5-alpha and that matches.  
14:33:47 5 I did that myself. I didn't enter that  
14:33:51 6 into evidence anywhere, but I did it  
14:33:53 7 myself. Anybody could do it for  
14:33:54 8 themselves.

14:33:56 9 Q. I'll get back to that, but  
14:33:58 10 let me take it a step at a time.

14:34:05 11 MR. YOUNG: Can we put the  
14:34:13 12 Mix Cal Acetate -- no, sorry. Can we  
14:34:16 13 put fraction 3 in the GC/MS on the top  
14:34:24 14 from the athlete's sample.

14:34:26 15 MS. SLOAN: That's USADA  
14:34:28 16 348.

14:34:37 17 MR. YOUNG: And on the  
14:34:38 18 bottom the IRMS from fraction 3 from  
14:34:43 19 the athlete's sample.

14:34:45 20 MS. SLOAN: That's USADA 349  
14:34:47 21 and they're both from Exhibit 25.

14:35:02 22 Q. So is this top chromatogram  
14:35:10 23 which you were talking about when you  
14:35:13 24 were saying that each of these peaks  
14:35:19 25 had been positively identified using --

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14:35:22 2 A. Yes, I believe so.

14:35:23 3 Q. -- using mass spectra as  
14:35:25 4 well as retention time?

14:35:28 5 A. Yes.

14:35:29 6 Q. So is there any way in  
14:35:33 7 between the GC/MS chromatogram up here  
14:35:42 8 and the IRMS chromatogram down there,  
14:35:46 9 that another peak could be -- could  
14:35:50 10 have snuck into the sample?

14:35:53 11 A. Not that I know of.

14:35:55 12 Q. If the peak that says 20.16  
14:36:11 13 is not PdIol in the IRMS chromatogram,  
14:36:21 14 do you have any explanation for what  
14:36:24 15 would have happened to the PdIol peak  
14:36:29 16 that was clearly present in the GC/MS  
14:36:32 17 chromatogram?

14:36:33 18 A. I would not. And I think  
14:36:35 19 you're referring to the peak that's  
14:36:36 20 labeled minus 26.16.

14:36:38 21 Q. Correct. So Dr. Brenna,  
14:38:06 22 this was a chart that you attached to  
14:38:11 23 your rebuttal witness statement. Could  
14:38:14 24 you explain that, please.

14:38:15 25 A. I recorded the retention



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14:38:29 2 times in GC/MS for the sample A  
14:38:37 3 analyses for both the athlete's sample  
14:38:42 4 and the blank urine pool, and I plotted  
14:38:48 5 the GC/MS retention times along the X  
14:38:51 6 axis and the GC/C/IRMS retention times  
14:38:54 7 along the Y axis. If those are all  
14:39:00 8 properly identified, then one would  
14:39:04 9 expect a monotonic relationship, that  
14:39:13 10 is an always rising relationship  
14:39:17 11 between the two, not necessarily a  
14:39:22 12 linear relationship. I wouldn't have  
14:39:25 13 expected it to be linear and that's  
14:39:27 14 what we find to a high degree of  
14:39:30 15 accuracy.

14:39:30 16 The line that's plotted  
14:39:33 17 through the points comes from a  
14:39:39 18 quadratic fit. In other words, it's a  
14:39:41 19 straight line with a small adjustment  
14:39:44 20 added for an X square term, and the  
14:39:56 21 solid diamonds aren't merely  
14:39:57 22 representing those steroids that are  
14:40:00 23 present in the Mix Cal Acetate and  
14:40:03 24 therefore we have positive IDs on  
14:40:05 25 those. The open ones are not in the

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14:40:08 2 Mix Cal Acetate, though they are in the  
14:40:11 3 Mixed Acetate.

14:40:12 4 Q. Did that add to your comfort  
14:40:15 5 that 5-alpha and Pdial had been  
14:40:18 6 properly identified?

14:40:21 7 A. Yes, it did.

14:40:26 8 MR. YOUNG: Let's put up the  
14:40:27 9 retention times for the B sample  
14:40:33 10 fraction 3, GC/MS and the retention  
14:40:39 11 times for the B sample fraction 3 IRMS.

14:40:44 12 MS. SLOAN: So they're both  
14:40:45 13 in Exhibit 25. It's Page USADA 321 and  
14:40:51 14 USADA 350.

14:40:58 15 Q. Dr. Brenna, could you show  
14:41:01 16 Jennefer if you want to compare those  
14:41:03 17 two what she ought to highlight. We'll  
14:41:06 18 get you the documents first.

14:41:32 19 A. Would you repeat the  
14:41:33 20 question.

14:41:34 21 Q. Sure. You had talked  
14:41:35 22 earlier about comparing I think it was  
14:41:40 23 relative retention times in the GC/MS  
14:41:44 24 against the relative retention times in  
14:41:47 25 the IRMS. If we want to do that which

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14:41:52 2 of these sections of the documents

14:41:56 3 would you have Jennifer blow up?

14:42:01 4 A. Okay. I would like -- hold

14:42:09 5 on a second. Just hold on a second.

14:42:20 6 Okay. So the top two, the chromatogram

14:42:23 7 and the next, yes. I don't have the

14:42:39 8 bottom document in front of me, but I

14:42:40 9 think what's required is the last box

14:42:43 10 of data there. Yes, I think that's

14:42:55 11 fine.

14:42:55 12 Q. I want to make sure you have

14:42:56 13 everything in front of you that you

14:42:58 14 need though.

14:43:06 15 A. Yes, okay. Thank you.

14:43:07 16 Sorry. Okay, and the question is which

14:43:13 17 numbers do we compare?

14:43:14 18 Q. Right. Your comment that

14:43:17 19 you could compare the relative

14:43:18 20 retention time between the two and that

14:43:22 21 would allow you to identify the 5-alpha

14:43:26 22 and Pd101.

14:43:36 23 A. So I believe -- okay. So we

14:43:38 24 start with the internal standard at

14:43:43 25 10.67. That's that one. And then this

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14:43:49 2 is on my computer, but I believe it's  
14:43:51 3 that guy, 871.9 is the corresponding  
14:43:57 4 internal standard. And then I would  
14:43:59 5 pair the 5-beta at 15 -- where are we?  
14:44:07 6 15.14 to I believe it is 13.18 here.  
14:44:18 7 And then the 5-alpha is 15.5 and in  
14:44:32 8 GC/C/IRMS it's 1352.4.

14:44:44 9 Q. Using those comparisons in  
14:44:47 10 that data how do you come to a  
14:44:49 11 conclusion? What's the relationship  
14:44:58 12 you're looking for?

14:44:59 13 A. Well, I have positive  
14:45:00 14 identification of two of those in the  
14:45:02 15 mass spectra and the third one comes  
14:45:05 16 right after the second one in the  
14:45:08 17 retention time ratio shown here and I  
14:45:16 18 don't see any other possibility for  
14:45:17 19 that 5-alpha beside that one right  
14:45:20 20 there.

14:45:25 21 Q. And how do those numbers  
14:45:28 22 relate to the chart that you showed us  
14:45:34 23 where there was a straight line with  
14:45:37 24 four solid boxes and then two open  
14:45:40 25 boxes?

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14:45:40 2 A. Two of them are solid boxes  
14:45:42 3 and one is an open box. If you put the  
14:45:47 4 chart back I can show you which ones  
14:45:49 5 they are. So 870 is that one. 870  
14:46:13 6 something. So that's the -- oh, I'm  
14:46:15 7 sorry, no, no. I've got that wrong.  
14:46:18 8 This is the GC/MS over here. That's  
14:46:20 9 this guy here. It's 870 over on this  
14:46:23 10 side. 870 there and 6 something over  
14:46:28 11 here. And then I think it's these two.  
14:46:32 12 No, I think it's these two.

14:46:33 13 Q. By the way, we're mixing and  
14:46:35 14 matching a little bit because this is a  
14:46:37 15 blank urine as opposed to the athlete's  
14:46:40 16 urine?

14:46:40 17 A. Yes, but what's hard about  
14:46:42 18 doing this, if I had the actual data  
14:46:44 19 I'd be able to pick them right out.  
14:46:46 20 And this includes the etio and andro  
14:46:49 21 and so forth on here as well. So I  
14:46:51 22 think it may be this pair. I don't  
14:46:53 23 have lines drawn across here, but I  
14:46:55 24 think it's this pair. I think it's the  
14:46:58 25 5-beta and that's the 5-alpha. And

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14:47:00 2 that would be -- no, that would be the  
14:47:02 3 Pdiol right there.

14:47:09 4 Q. Were you here when Ms.  
14:47:12 5 Mongongu and Ms. Frelat testified that  
14:47:17 6 they also compared the retention times  
14:47:21 7 of the blank urine against the  
14:47:25 8 retention times -- I'll make it more  
14:47:29 9 clear. That they compared the  
14:47:30 10 retention times of the blank urine in  
14:47:32 11 the IRMS with the retention times of  
14:47:35 12 the athlete's sample in the IRMS?

14:47:37 13 A. I believe I was here, yes.

14:47:39 14 Q. And is that also a  
14:47:41 15 legitimate way to identify peaks?

14:47:44 16 A. It seems to me it is, yes.

14:47:46 17 Q. Let me direct your attention  
14:48:09 18 to Exhibit 26, LNDD 451. Take a minute  
14:48:37 19 to look at that document.

14:48:39 20 A. Okay.

14:48:54 21 MS. SLOAN: I think Rich may  
14:48:56 22 have said it, but it's Exhibit 26.

14:49:07 23 A. Okay.

14:49:08 24 Q. Have you seen that document  
14:49:09 25 before?

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14:49:09 2 A. I almost certainly have,  
14:49:10 3 yes, but I must say I haven't -- have  
14:49:16 4 no specific recollection of formulating  
14:49:19 5 an opinion.

14:49:20 6 Q. As you look at it can you  
14:49:26 7 identify it as a document that  
14:49:31 8 validates delta/delta uncertainty of  
14:49:37 9 0.8 delta units?

14:49:47 10 A. Just give me a moment.

14:49:50 11 Q. And if you're not familiar  
14:49:55 12 enough -- if you're not familiar enough  
14:49:58 13 with the document to be comfortable  
14:50:00 14 with an answer you obviously don't have  
14:50:02 15 to give one.

14:50:06 16 A. Well it certainly looks to  
14:50:09 17 be such a document. We have -- we have  
14:50:15 18 replicate measurements of steroids in  
14:50:21 19 an F1, F2 and F3 fractions which have  
14:50:28 20 always meant, and all the other  
14:50:31 21 documents, that they came from a blank  
14:50:35 22 urine. I see a mean in per mil  
14:50:40 23 standard deviation and the respective 2  
14:50:43 24 standard deviation limits. The average  
14:50:55 25 standard deviation looks to be on the

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14:50:57 2 order of about 330, just guessing, on  
14:51:00 3 the set LNDD 453. And roughly the same  
14:51:11 4 on LNDD 456.

14:51:22 5 Q. Let me direct your attention  
14:51:24 6 to Exhibit 26, Page LNDD 309. Tell me  
14:51:43 7 when you found it.

14:51:44 8 A. I found it.

14:51:45 9 Q. Take a minute to look at it.

14:51:52 10 A. This list I remember.

14:51:53 11 Q. You do remember it?

14:51:54 12 A. I remember this one, yes.

14:51:58 13 Q. Mr. Suh asked you in his  
14:52:01 14 cross examination about identification  
14:52:04 15 documentation on this particular blank  
14:52:09 16 urine pool. Is that what this document  
14:52:17 17 means to you?

14:52:19 18 A. Well, I'm going to have to  
14:52:31 19 say I looked more at this document for  
14:52:33 20 the test/retest numbers. So I'm  
14:52:40 21 looking at it a little more carefully.  
14:52:42 22 It certainly is labeled blank urine  
14:52:45 23 pool 4. It certainly seems to be that.

14:53:07 24 MR. YOUNG: Can we put up  
14:53:09 25 GDC 1350.



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14:53:26 2 Q. When you attended the  
14:53:33 3 reprocessing of the electronic data  
14:53:35 4 files did you watch the LNDD operators?

14:53:39 5 A. I did.

14:53:40 6 Q. And did you watch how they  
14:53:44 7 performed manual integration?

14:53:47 8 A. I did.

14:53:47 9 Q. And was Ms. Frelat's  
14:53:53 10 testimony this morning consistent with  
14:53:57 11 what you saw them doing?

14:53:59 12 A. Yes.

14:53:59 13 Q. Mr. Suh asked --

14:54:31 14 MR. YOUNG: I don't need the  
14:54:33 15 zero highlighted.

14:54:34 16 Q. Mr. Suh asked you to compare  
14:54:36 17 the column of the original results in  
14:54:41 18 sample A and B with the manual results  
14:54:48 19 in sample A and B. With the question  
14:54:57 20 in mind whether this is a positive test  
14:55:03 21 or not a positive test, do the  
14:55:09 22 variabilities that Mr. Suh pointed out  
14:55:11 23 to you cause you in any way to doubt  
14:55:17 24 your conclusion that this was an  
14:55:21 25 adverse analytical finding?

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14:55:23 2 A. No.

14:55:24 3 Q. And why would that be?

14:55:26 4 A. If -- well, the magnitude of  
14:55:37 5 the delta/delta is quite large compared  
14:55:42 6 to the threshold that's been set, the  
14:55:48 7 threshold being at 3.8 per mil or  
14:55:53 8 absolute magnitude or minus 3.8 per  
14:55:56 9 mil, and I don't see any changes in the  
14:55:59 10 5-alpha that bring us near that  
14:56:06 11 threshold. I also see reasonable  
14:56:08 12 correspondence between the various  
14:56:12 13 methods that have been used to reduce  
14:56:13 14 the data. That's what this is called,  
14:56:15 15 various methods that have been used to  
14:56:18 16 calculate these delta values from the  
14:56:20 17 raw data. And so I don't have a  
14:56:26 18 problem with it.

14:56:35 19 MR. RIVKIN: Mr. Young, are  
14:56:36 20 you finished with this document now?

14:56:38 21 MR. YOUNG: Yes. Do you  
14:56:39 22 have questions on it?

14:56:40 23 MR. RIVKIN: Yes, I do.

14:56:41 24 Thank you. Dr. Brenna, let me ask  
14:56:47 25 about the blank urine results in the

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14:56:53 2 bottom half of the screen.

14:56:54 3 THE WITNESS: Yes.

14:56:55 4 MR. RIVKIN: As I understand

14:56:56 5 it, blank urine is meant to be clean

14:57:00 6 urine; is that right?

14:57:01 7 THE WITNESS: No.

14:57:05 8 MR. RIVKIN: So blank urine

14:57:06 9 could contain potential steroids?

14:57:12 10 THE WITNESS: Well, it

14:57:13 11 contains steroids. It contains all the

14:57:15 12 metabolites at the same concentrations,

14:57:19 13 approximately, as athlete's urine. The

14:57:23 14 isotope ratios will be very similar to

14:57:28 15 those of the athlete and they'll be at

14:57:35 16 -- well, they're at natural abundance.

14:57:38 17 They presumably will have no exogenous

14:57:44 18 steroid in them. And if that's the

14:57:47 19 sole point you're making, that's true.

14:57:49 20 But clean in a sense of no doping

14:57:52 21 perhaps. I interpreted that --

14:57:54 22 MR. RIVKIN: That's what I

14:57:55 23 meant, no doping.

14:57:56 24 THE WITNESS: Sorry about

14:57:57 25 that.

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14:57:58 2 MR. RIVKIN: Then I guess

14:57:59 3 I'm confused by the 5-alpha versus

14:58:10 4 Pdiol line, for example, in the blanks,

14:58:13 5 and why those results either under the

14:58:16 6 automatic integration or the MassLynx

14:58:18 7 calculation would show a greater than

14:58:22 8 three difference there.

14:58:24 9 THE WITNESS: The auto and

14:58:25 10 the MassLynx are automatic. And are

14:58:28 11 not subject to the quality control

14:58:31 12 which we've called manual integration

14:58:35 13 that the original results are subject

14:58:38 14 to. And so if the manual integration

14:58:45 15 resulted in no changes from automatic,

14:58:49 16 there wouldn't be any reason to do it.

14:58:51 17 So there will be some changes, but if

14:58:53 18 you look at the correspondence between

14:58:55 19 original result and manual for the

14:59:02 20 blanks, correspondence is pretty good.

14:59:09 21 MR. RIVKIN: The

14:59:10 22 correspondence is pretty good, but it's

14:59:13 23 picking up -- so this would not show a

14:59:26 24 -- even putting aside the .8 percent

14:59:30 25 uncertainty, in your view this wouldn't

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14:59:33 2 show a violation or exogenous use  
14:59:37 3 because under the proper manual  
14:59:40 4 integration you end up with results  
14:59:44 5 lower than three?

14:59:45 6 THE WITNESS: Yes. And may  
14:59:46 7 I read something into your question,  
14:59:48 8 which is you may be thinking that those  
14:59:50 9 numbers should be zero. And they --

14:59:55 10 MR. RIVKIN: Yes, or close.  
14:59:56 11 Yes, certainly close to zero.

14:59:59 12 THE WITNESS: They're not  
15:00:00 13 necessarily zero. There is some  
15:00:02 14 isotopic fractionation, that's what we  
15:00:06 15 call it, that can occur normally and so  
15:00:16 16 there will be a normal isotopic  
15:00:20 17 relationship between the two, between  
15:00:21 18 two steroids. So for instance, if you  
15:00:23 19 look at the 5-alpha minus Pdol line  
15:00:27 20 there you see minus 1.60. Let me point  
15:00:34 21 to it. And minus 1.89 here. And so  
15:00:38 22 that would be in the reasonable range  
15:00:44 23 for a negative. Some differences are  
15:00:49 24 larger than others.

15:00:54 25 MR. RIVKIN: Thank you.

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15:00:58 2 Q. To follow up on that,  
15:01:00 3 between the auto number of 3., 4, 5,  
15:01:08 4 now that's when the machine does it  
15:01:10 5 without any manual integration; is that  
15:01:14 6 right?

15:01:14 7 A. Yes.

15:01:14 8 Q. And the manual integration  
15:01:18 9 result of 1.60 which is the most  
15:01:28 10 reliable?

15:01:29 11 A. In my opinion the manual  
15:01:30 12 integration result is more reliable.

15:01:32 13 Q. And then, is there an  
15:01:34 14 explanation under MassLynx where you  
15:01:37 15 don't do manual integration why this  
15:01:43 16 number is 3.66?

15:01:44 17 A. Well, yes, and I sort of  
15:01:48 18 alluded to that. It's another form of  
15:01:50 19 automatic integration and as I think I  
15:01:54 20 made a comment a couple of times, there  
15:01:57 21 was at least one point, and I don't  
15:01:59 22 remember which one it was, during the  
15:02:02 23 manual reprocessing where there was a  
15:02:04 24 desire to do some manual integration  
15:02:09 25 with MassLynx and the software that

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15:02:11 2 happened to be on the program -- on the  
15:02:14 3 computer at the time was unable to do  
15:02:16 4 it. It crashed, and there's  
15:02:20 5 documentation for that. But in any  
15:02:22 6 case, it's not subject to the same sort  
15:02:24 7 of quality control.

15:02:24 8 Q. Would you consider because  
15:02:27 9 of that this 3.66 number to be  
15:02:31 10 unreliable?

15:02:33 11 A. I considered it unreliable,  
15:02:35 12 yes.

15:02:37 13 MR. PAULSSON: By the way,  
15:02:38 14 what is it about 5-alpha? Does it tend  
15:02:43 15 to be the squeakiest wheel?

15:02:47 16 THE WITNESS: Well, this is  
15:02:48 17 a question for Shackleton and Clark.  
15:02:51 18 Sorry.

15:02:53 19 MR. PAULSSON: But without  
15:02:54 20 an explanation you might have an  
15:02:57 21 answer?

15:02:58 22 THE WITNESS: I don't.  
15:03:01 23 Sorry.

15:03:02 24 MR. RIVKIN: Was there any  
15:03:03 25 discussion of these results when you

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15:03:04 2 were at the reprocessing.

15:03:06 3 A. Well, I'm not sure how to  
15:03:17 4 answer that question. We were trying  
15:03:19 5 not to discuss results as they were  
15:03:21 6 coming off. The other thing is these  
15:03:23 7 data don't actually come off the  
15:03:25 8 machine, you have to enter them into  
15:03:27 9 your Excel spreadsheet and make these  
15:03:29 10 calculations.

15:03:30 11 MR. RIVKIN: Were these  
15:03:31 12 calculations done while everybody was  
15:03:33 13 together at the reprocessing?

15:03:35 14 THE WITNESS: Towards the  
15:03:36 15 end of the day we kind of made them and  
15:03:38 16 we went -- we didn't sort of look at  
15:03:40 17 each other and compare notes and all  
15:03:41 18 that kind of stuff and of course the  
15:03:43 19 attorneys asked us to get the data and  
15:03:45 20 call them as soon as we knew what was  
15:03:47 21 going on and I think we took that as a  
15:03:50 22 directive to gather the data and call  
15:03:54 23 them.

15:03:55 24 MR. RIVKIN: So there wasn't  
15:03:56 25 a lot of conversation during the day



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15:04:01 2 between say you and others acting for  
15:04:03 3 USADA, Dr. Davis and others working for  
15:04:08 4 Landis and Dr. Botre working for the  
15:04:10 5 panel?

15:04:11 6 THE WITNESS: Correct.

15:04:13 7 MR. RIVKIN: Thank you.

15:04:19 8 Q. Was there any discussion on  
15:04:20 9 this 3.66 MassLynx value?

15:04:23 10 A. Unless it's the one that I  
15:04:25 11 referred to a moment ago, I don't  
15:04:26 12 recall any. In Paris?

15:04:31 13 Q. Yes, when the computer  
15:04:32 14 crashed?

15:04:32 15 A. Is that the one where the  
15:04:34 16 computer crashed? I just don't -- I  
15:04:36 17 just don't remember if that's the one.  
15:04:38 18 It's known which one that is and I just  
15:04:40 19 don't remember. For the one for which  
15:04:42 20 the computer crashed there was  
15:04:44 21 discussion that the computer had  
15:04:45 22 crashed and so we made a record of it.  
15:04:48 23 I'm not -- I've never used the MassLynx  
15:04:53 24 software so I couldn't say much about  
15:04:56 25 it. The impression -- well, looking at

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15:05:01 2 that -- looking back at that  
15:05:03 3 documentation it confirmed my opinion  
15:05:05 4 at the time that the functionality for  
15:05:08 5 manual integration was to be built into  
15:05:11 6 the software, but for whatever reason  
15:05:15 7 it caused the computer to crash when  
15:05:19 8 one tried to implement it.

15:05:51 9 Q. Let me show you --

15:06:58 10 THE PRESIDENT: You showed  
15:06:59 11 us this the other day and I can't  
15:07:01 12 remember, did we give it a number then?

15:07:07 13 MR. YOUNG: We did not. You  
15:07:08 14 asked that we authenticate it through  
15:07:10 15 this witness. So if we can give it a  
15:07:12 16 number now then I will authenticate it  
15:07:14 17 through this witness.

15:07:19 18 MS. SLOAN: I guess we're up  
15:07:21 19 to Exhibit 156.

15:07:23 20 THE PRESIDENT: Exhibit 156  
15:07:31 21 then?

15:07:36 22 MS. SLOAN: Yes.

15:07:38 23 THE PRESIDENT: Thank you.  
15:07:39 24 Exhibit 156 a photograph with clarity.

15:07:50 25 (Respondent's Exhibit

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15:08:00 2 156 for identification, photograph.)

15:08:00 3 Q. Dr. Brenna, will you

15:08:02 4 identify this photograph?

15:08:03 5 A. Yes, that's a photograph of

15:08:06 6 one of the isotope ratio mass

15:08:09 7 spectrometers in my laboratory at

15:08:11 8 Cornell. It has been there since 1990.

15:08:19 9 Q. Who put the coyote there?

15:08:22 10 A. I believe Keith Goodman put

15:08:24 11 it there.

15:08:25 12 Q. And are those lifting rings

15:08:29 13 removable?

15:08:30 14 A. I should clarify that. I

15:08:32 15 put the coyote there, but Keith --

15:08:35 16 well, Keith left the coyote on the

15:08:37 17 machine at about that spot. Anyway,

15:08:39 18 sorry. Yes, those are lifting rings.

15:08:44 19 Q. And are they removable?

15:08:46 20 A. They are.

15:08:47 21 MR. YOUNG: I have no

15:08:53 22 further questions.

15:08:58 23 MR. RIVKIN: Dr. Brenna,

15:08:59 24 there's been some testimony about the

15:09:01 25 lab manually integrating the internal

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15:09:06 2 standards. And I was wondering if you  
15:09:09 3 could comment on that.

15:09:12 4 THE WITNESS: Can you narrow  
15:09:15 5 down the scope of your question a  
15:09:16 6 little.

15:09:17 7 MR. RIVKIN: I was hoping I  
15:09:18 8 didn't have to. I think the question  
15:09:27 9 was put in such a way that it implied  
15:09:29 10 that the internal standard was used in  
15:09:32 11 part to test the accuracy or precision  
15:09:35 12 of the machine and that an internal  
15:09:38 13 standard had to fall within a certain  
15:09:40 14 time range and a certain isotopic  
15:09:44 15 value. And if you manually integrate  
15:09:47 16 the internal standard the implication  
15:09:49 17 from the questioning was then you're  
15:09:55 18 able to validate the functioning of the  
15:09:59 19 equipment through simply manually  
15:10:01 20 integrating it rather than actually  
15:10:03 21 testing the equipment and whether it's  
15:10:05 22 doing what it's supposed to.

15:10:09 23 That was what I took out of  
15:10:11 24 the questioning, at least that  
15:10:12 25 implication, and I was wondering if you

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15:10:16 2 feel that it's appropriate to manually  
15:10:21 3 integrate the internal standard or any  
15:10:23 4 standards that are used to measure the  
15:10:25 5 functioning of the machine and whether  
15:10:27 6 that affects the quality of the  
15:10:30 7 machine.

15:10:31 8 THE WITNESS: Okay, very  
15:10:32 9 good. I understand better what you're  
15:10:33 10 after. The procedure which we call  
15:10:39 11 manual integration is outlined in a  
15:10:45 12 standard operating procedure of the  
15:10:47 13 LNDD lab. That standard operating  
15:10:50 14 procedure was produced when we were  
15:10:54 15 there for the reprocessing.

15:10:56 16 It was produced after at  
15:11:00 17 least some manual reprocessing was  
15:11:03 18 done, and I was able to observe that  
15:11:04 19 and I testified in the last -- Malibu,  
15:11:08 20 that it was a very mechanical process.

15:11:11 21 And so I believe that the  
15:11:12 22 material in the standard operating  
15:11:14 23 procedure is what they were doing.

15:11:16 24 To your question, it's part  
15:11:20 25 of the analysis. That standard

1 J. THOMAS BRENNAN

15:11:23 2 operating procedure is part of their  
15:11:25 3 analysis. And as a result, I think it  
15:11:29 4 is appropriate to do it on the  
15:11:32 5 standards.

15:11:34 6 Now, the question of whether  
15:11:37 7 it's appropriate to do it on the  
15:11:41 8 5-alpha androstanol, you asked me that.

15:11:45 9 MR. RIVKIN: Right. But you  
15:11:47 10 got to say it instead of me.

15:11:49 11 THE WITNESS: Oh, sorry.  
15:11:51 12 Oh, I see. If folks in my lab brought  
15:11:59 13 me data like this where we had four  
15:12:08 14 standards that were nicely resolved and  
15:12:12 15 then were manually integrating and a  
15:12:16 16 peak that had interferences on both  
15:12:18 17 sides and was generally in -- eluted in  
15:12:23 18 an ugly part of a chromatogram, ugly  
15:12:26 19 meaning poor chromatography, I would  
15:12:28 20 ask the question why are you guys doing  
15:12:31 21 this. It really doesn't tell us  
15:12:33 22 anything. And my experience over the  
15:12:40 23 years is sometimes I get a coherent  
15:12:42 24 answer and sometimes I don't to a  
15:12:43 25 question like that.

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15:12:44 2 So I don't see any harm in  
15:12:46 3 it. I don't understand why the numbers  
15:12:49 4 were recorded. I don't believe that  
15:12:52 5 they used those numbers as quality  
15:12:55 6 control for the delta values. It  
15:12:59 7 doesn't bother me in the least that  
15:13:02 8 those numbers came out poorly. And I  
15:13:05 9 don't believe they apply to the -- to  
15:13:11 10 the parts of the chromatogram that are  
15:13:14 11 relevant in this case.

15:13:20 12 MR. RIVKIN: Is it the  
15:13:25 13 internal standard, the five andro, or  
15:13:27 14 is it some other molecule that is used  
15:13:32 15 to test the actual functioning of  
15:13:35 16 equipment is it measuring things  
15:13:38 17 correctly?

15:13:39 18 THE WITNESS: There are  
15:13:39 19 other molecules. There are these  
15:13:41 20 alkanes that have been referred to a  
15:13:42 21 moment ago and then there's this Mix  
15:13:46 22 Cal Acetate that's also used before and  
15:13:47 23 after all the samples are run.

15:13:49 24 MR. RIVKIN: And with the  
15:13:50 25 known molecules in the Mix Cal Acetate

1 J. THOMAS BRENNAN - REDIRECT

15:13:53 2 you know where they're supposed to come  
15:13:55 3 out?

15:13:55 4 THE WITNESS: And what their  
15:13:57 5 isotope ratios are supposed to be.

15:13:59 6 MR. RIVKIN: Thank you.

15:14:01 7 MR. YOUNG: May I follow up  
15:14:02 8 on that question?

15:14:03 9 THE PRESIDENT: Yes,  
15:14:05 10 briefly.

15:14:06 11 REDIRECT EXAMINATION

15:14:10 12 BY MR. YOUNG:

15:14:10 13 Q. The laboratory technicians  
15:14:13 14 said that sometimes they would manually  
15:14:22 15 integrate the Mix Cal Acetate and the  
15:14:25 16 Mix Cal IRMS. Does the fact that they  
15:14:34 17 would do that from time to time  
15:14:35 18 undermine your confidence in the  
15:14:37 19 reliability of the results in this  
15:14:38 20 case?

15:14:38 21 A. No, that's what I was trying  
15:14:40 22 to point out, yes. It does not undermine  
15:14:43 23 my confidence.

15:14:46 24 Q. You were talking about the  
15:14:48 25 internal standard, the 5-alpha



1 J. THOMAS BRENNAN - REDIRECT

15:14:50 2 androsterone before. Why -- is there  
15:14:55 3 an explanation why that wouldn't  
15:14:59 4 undermine your confidence here when  
15:15:00 5 we're talking about, say, the Mix Cal  
15:15:03 6 Acetate, or is it the same?

15:15:06 7 A. The 5-alpha androstanol  
15:15:10 8 elutes in a crowded point in most of  
15:15:12 9 the chromatograms. That doesn't bother  
15:15:15 10 me if that one is off. The other ones  
15:15:18 11 are clean. So that tells me the other  
15:15:20 12 one is working.

15:15:21 13 Q. And if they manually  
15:15:23 14 integrate, which sometimes they do, the  
15:15:28 15 Mix Cal IRMS, for example, does that  
15:15:36 16 cause you to lose confidence in the  
15:15:40 17 results?

15:15:40 18 A. No.

15:15:46 19 THE PRESIDENT: Mr. Rivkin  
15:15:48 20 has one more question.

15:15:50 21 MR. RIVKIN: Is it part of  
15:15:51 22 your work to advise on what the proper  
15:15:53 23 positivity criteria are for testing?

15:15:56 24 THE WITNESS: No, I'm afraid  
15:15:57 25 not.

1 J. THOMAS BRENNAN - RECROSS

15:15:58 2 MR. RIVKIN: Thank you.

15:16:03 3 THE PRESIDENT: There are no  
15:16:04 4 more questions from the panel, but we  
15:16:08 5 consider that Mr. Suh if he wishes can  
15:16:10 6 ask questions of this witness about his  
15:16:12 7 comments on what Dr. Davis said because  
15:16:17 8 this is not meant to be a critical  
15:16:19 9 statement, that material wasn't  
15:16:22 10 introduced earlier so you haven't had a  
15:16:24 11 chance to deal with that.

15:16:27 12 MR. SUH: I don't have very  
15:16:28 13 many questions. I do have some  
15:16:29 14 questions about things which appeared  
15:16:32 15 for the first time on redirect like  
15:16:34 16 this lifting rings issue. It's not a  
15:16:36 17 subject of cross, so I'd like to ask a  
15:16:39 18 few questions about that. And I would  
15:16:41 19 like to ask two questions so the  
15:16:43 20 panel's not confused about the blank  
15:16:46 21 urine.

15:16:46 22 THE PRESIDENT: Sure.

15:16:47 23 RECROSS EXAMINATION

15:16:51 24 BY MR. SUH:

15:16:51 25 Q. I'd like to show you LNDD

1 J. THOMAS BRENNAN - RECROSS

15:16:53 2 309.

15:17:06 3 MS. SLOAN: That's Exhibit

15:17:07 4 26, right?

15:17:08 5 MR. SUH: I believe so.

15:17:09 6 Q. Very briefly, Dr. Brenna,  
15:17:10 7 you indicated that this exhibit shows  
15:17:15 8 identification information about the  
15:17:16 9 blank urine. I should have been more  
15:17:18 10 precise in my earlier question. This  
15:17:22 11 exhibit shows identification  
15:17:23 12 information about the GC/MS run of the  
15:17:27 13 blank urine, right?

15:17:32 14 A. I'm sorry, what page are you  
15:17:34 15 on?

15:17:35 16 Q. LNDD 309. It's the one  
15:17:37 17 that --

15:17:37 18 A. I'm sorry, I'm sorry. Would  
15:17:43 19 you please reask the question.

15:18:06 20 MR. SUH: Would you have it  
15:18:07 21 read back.

15:18:08 22 (Record read as requested.)

15:18:08 23 A. So this is C 8, right? Are  
15:18:11 24 we talking only about this page?

15:18:13 25 Q. Yes.

1 J. THOMAS BRENNAN - RECROSS

15:18:18 2 A. There is GC/MS information  
15:18:20 3 at the bottom of the page.

15:18:21 4 Q. Right. This page does not  
15:18:24 5 have identification information of the  
15:18:28 6 peaks in the IRMS run of the blank  
15:18:30 7 urine, correct?

15:18:33 8 A. No. Yes, you're correct.

15:18:35 9 Q. I'd like to turn your  
15:18:50 10 attention back to the Wiley E. Coyote  
15:18:55 11 -- actually it's not, it's a Finnigan  
15:18:55 12 instrument, right?

15:18:56 13 A. Yes, sir, it's a Finnigan  
15:18:59 14 MAT 252.

15:19:00 15 Q. And you don't have an  
15:19:01 16 IsoPrime instrument in your laboratory?

15:19:04 17 A. That is correct.

15:19:05 18 Q. And you never used an  
15:19:07 19 IsoPrime instrument, correct?

15:19:08 20 A. No.

15:19:08 21 Q. And of course the IsoPrime  
15:19:11 22 instrument is a different instrument  
15:19:13 23 from the Finnigan instrument, correct?

15:19:14 24 A. It's the same -- the point  
15:19:17 25 of the instrument is the same. And the

1 J. THOMAS BRENNAN - RECROSS

15:19:19 2 construction is the same, and it has a  
15:19:21 3 magnet in the same way and so forth.  
15:19:23 4 It is a distinctly designed instrument,  
15:19:25 5 although the principles are all pretty  
15:19:28 6 much the same.

15:19:28 7 Q. Is it your testimony that  
15:19:30 8 the IsoPrime 2 instrument has precisely  
15:19:35 9 the same design as your Finnigan  
15:19:37 10 instrument?

15:19:37 11 A. Not precisely the same  
15:19:39 12 design, no, of course not.

15:19:40 13 Q. Do you know whether the  
15:19:43 14 IsoPrime 2 has stray magnetic fields?

15:19:45 15 A. I know it has no stray  
15:19:47 16 magnetic fields that affect the ions.

15:19:50 17 Q. Do you know whether or not  
15:19:50 18 it has stray magnetic fields, period?

15:19:55 19 A. I guess the answer is no.

15:19:58 20 Q. And let me ask you this. Do  
15:20:07 21 lifting rings -- would metal lifting  
15:20:12 22 rings affect an instrument with stray  
15:20:15 23 magnetic fields?

15:20:16 24 A. No.

15:20:17 25 Q. And does your instrument,

1 J. THOMAS BRENNAN - RE CROSS

15:20:21 2 the Finnigan instrument have stray  
15:20:24 3 magnetic fields?

15:20:26 4 A. If you're going to continue  
15:20:27 5 to ask me about stray magnetic fields I  
15:20:30 6 need to know a little bit more about  
15:20:32 7 what you mean by stray magnetic fields.  
15:20:35 8 There's stray magnetic fields due to  
15:20:37 9 the earth or there might be one because  
15:20:40 10 of moving metal in the region. Since  
15:20:42 11 I've already answered you with respect  
15:20:44 12 to the effects of the ions in the  
15:20:46 13 machine, I'm having trouble knowing  
15:20:48 14 what level you're asking me.

15:20:49 15 Q. I'm asking about the effect  
15:20:50 16 of pieces of metal near the magnet  
15:20:52 17 which is part of the IRMS instrument.

15:20:56 18 A. Well, any small piece of  
15:20:59 19 metal, if it's ferromagnetic and all  
15:21:03 20 metals are not ferromagnetic, and not  
15:21:06 21 all metals are ferromagnetic. You see  
15:21:07 22 a copper tube across the top of that  
15:21:10 23 magnet, that won't have any effect.  
15:21:13 24 Any ferromagnetic material will have an  
15:21:15 25 effect.

1 J. THOMAS BRENNAN - RECROSS

15:21:16 2 Q. Do you know what kind of  
15:21:17 3 effect leaving the lifting rings on an  
15:21:20 4 IsoPrime 1 instrument would have, or  
15:21:21 5 not have?

15:21:21 6 A. I do know the effect on an  
15:21:23 7 IsoPrime 1, the IsoPrime 1 that was  
15:21:25 8 used for this analysis.

15:21:26 9 Q. But you don't know the  
15:21:27 10 effect on an IsoPrime 2?

15:21:30 11 A. Well, I guess I don't. I  
15:21:32 12 don't have any data in front of me.  
15:21:34 13 There are data in the doc packs  
15:21:37 14 indicating that the lift rings on the  
15:21:39 15 IsoPrime 1 didn't have any effect.

15:21:47 16 Q. Thank you. And lastly, with  
15:21:49 17 respect to your last comment about  
15:21:50 18 quality controls, the quality controls  
15:21:52 19 you were talking about in response to  
15:21:54 20 Mr. Rivkin's question in the alkanes  
15:21:56 21 and the Mix Cal Acetate, none of those  
15:21:58 22 would be in the samples themselves,  
15:22:00 23 correct?

15:22:02 24 A. That's correct.

15:22:06 25 MR. SUH: No further

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15:22:07 2 questions.

15:22:08 3 THE PRESIDENT: Thank you

15:22:09 4 very much, Dr. Brenna. You're free to

15:22:11 5 leave now. Mr. Young, while you get

15:22:41 6 Mr. Matthews ready we'll take a 10

15:22:43 7 minute break until 3:30.

15:22:45 8 (A recess was taken.)

15:38:20 9 THE PRESIDENT: Mr. Barnett,

15:39:47 10 are you ready?

15:39:48 11 MR. BARNETT: Sure.

15:40:06 12 THE PRESIDENT: Good

15:40:08 13 afternoon, Dr. Matthews.

15:40:09 14 DR. MATTHEWS: Good afternoon.

15:40:16 15 THE PRESIDENT: Do you

15:40:17 16 declare and affirm that the expert

15:40:19 17 opinions that you give to this tribunal

15:40:21 18 will represent your honest opinion in

15:40:23 19 these matters?

15:40:24 20 DR. MATTHEWS: I do.

15:40:24 21 D W I G H T E. M A T T H E W S,

15:40:24 22 called as a witness on behalf of the

15:40:24 23 Respondent, having been first duly

15:40:24 24 affirmed by the President, was examined

15:40:31 25 and testified as follows:



1 DWIGHT E. MATTHEWS - DIRECT

15:40:31 2 THE PRESIDENT: I think  
15:40:31 3 you've heard the usual routine here so  
15:40:34 4 we don't have to tell you that. You  
15:40:35 5 know who's going to question you. And  
15:40:37 6 you know the rule, if you want to read  
15:40:39 7 something before you answer, you're  
15:40:40 8 entitled to do that.

15:40:41 9 THE WITNESS: Certainly.

15:40:43 10 THE PRESIDENT: Please  
15:40:43 11 proceed.

15:40:44 12 DIRECT EXAMINATION

15:40:45 13 BY MR. BARNETT:

15:40:45 14 Q. Dr. Matthews, did you  
15:40:48 15 provide a witness statement and a  
15:40:49 16 rebuttal witness statement in this  
15:40:51 17 case?

15:40:51 18 A. Yes, I did.

15:40:52 19 Q. And do you affirm that  
15:40:53 20 they're true and accurate copies of  
15:40:55 21 your testimony?

15:40:56 22 A. Yes, I do.

15:40:57 23 MR. BARNETT: Thank you.

15:41:00 24 CROSS EXAMINATION

15:41:01 25 BY MR. SUH:

1 DWIGHT E. MATTHEWS - CROSS

15:41:01 2 Q. Dr. Matthews, you would  
15:41:02 3 agree that the concept of peer  
15:41:04 4 reviewing papers is a very important  
15:41:06 5 one in relation to the publication of  
15:41:09 6 scientific papers?

15:41:12 7 A. I would.

15:41:13 8 Q. And certainly you would  
15:41:17 9 agree that an important level of peer  
15:41:19 10 review occurs when co-authors satisfy  
15:41:22 11 themselves that work done by their  
15:41:24 12 colleagues is scientifically credible,  
15:41:26 13 right?

15:41:26 14 A. I would.

15:41:27 15 Q. Let's go over your CV. Do  
15:41:33 16 you have it before you?

15:41:33 17 A. Actually, if you could grab  
15:41:35 18 that copy that is off my chair over  
15:41:37 19 there. Just the top one is fine. Yes.

15:41:51 20 Q. I want to direct your  
15:41:52 21 attention to a number of papers  
15:41:58 22 referenced there, numbers 107, 108,  
15:42:03 23 109, 114, 115, 122, 125, 129, 131 and  
15:42:13 24 132.

15:42:14 25 MR. BARNETT: Can we let the

1 DWIGHT E. MATTHEWS - CROSS

15:42:15 2 witness keep up.

15:42:16 3 A. I have to find my pages

15:42:18 4 first. Okay. Yes, 107.

15:42:21 5 THE PRESIDENT: We're not

15:42:22 6 asking you to remember them all at that

15:42:24 7 speed. So we'll go back again.

15:42:26 8 A. I assume you're referring to

15:42:27 9 papers with the name E.T. Poehlman on

15:42:29 10 them?

15:42:30 11 Q. Correct.

15:42:31 12 A. Okay.

15:42:32 13 Q. Dr. Poehlman was a colleague

15:42:33 14 of yours at the University of Vermont,

15:42:37 15 correct?

15:42:37 16 A. Correct.

15:42:37 17 Q. In addition to co-authoring

15:42:39 18 papers with Dr. Poehlman you actually

15:42:41 19 shared lab space with him, correct?

15:42:43 20 A. More the latter. He shared

15:42:45 21 lab space with me, yes.

15:42:47 22 Q. Dr. Poehlman is no longer on

15:42:50 23 the faculty of the University of

15:42:51 24 Vermont, correct?

15:42:52 25 A. Correct.

1 DWIGHT E. MATTHEWS - CROSS

15:42:53 2 Q. And he is no longer on the  
15:42:56 3 faculty because he pled guilty to  
15:42:58 4 falsifying data in research over the  
15:43:00 5 course of almost a decade, correct?

15:43:02 6 A. He resigned before that  
15:43:04 7 happened.

15:43:04 8 Q. But he did in fact plead  
15:43:06 9 guilty to falsifying data in research?

15:43:08 10 A. Yes.

15:43:08 11 Q. Over the course of almost a  
15:43:10 12 decade?

15:43:11 13 A. He was convicted.

15:43:12 14 Q. Ann was convicted in federal  
15:43:13 15 court, right?

15:43:14 16 A. In federal court.

15:43:15 17 Q. Among other things, Dr.  
15:43:17 18 Poehlman was found to have falsified  
15:43:19 19 data in relation to the mean values for  
15:43:22 20 a total energy expenditure obtained  
15:43:26 21 with a doubly labeled water technique,  
15:43:27 22 correct?

15:43:27 23 A. Correct.

15:43:28 24 Q. And three of the papers that  
15:43:28 25 you co-authored with him involved a

1 DWIGHT E. MATTHEWS - CROSS

15:43:31 2 doubly labeled water study?

15:43:33 3 A. Correct.

15:43:33 4 Q. And --

15:43:38 5 A. There may be more than  
15:43:39 6 three.

15:43:40 7 Q. The paper number 107 on your  
15:43:43 8 CV which is entitled "Energy  
15:43:45 9 requirements" -- excuse me, 114 on your  
15:43:49 10 CV, "Energy requirements of physical  
15:43:51 11 activity in free-living older women and  
15:43:56 12 men: A doubly labeled water study,"you  
15:44:00 13 refer to as the gold standard for  
15:44:02 14 validating other methods to measure;  
15:44:05 15 isn't that right?

15:44:06 16 A. The doubly labeled water  
15:44:08 17 method would be considered a gold  
15:44:09 18 standard. These papers apply that  
15:44:12 19 method. They didn't define it.

15:44:14 20 Q. Now, the doubly labeled  
15:44:16 21 water method is a stable isotope  
15:44:18 22 approach, correct?

15:44:19 23 A. Yes, it is.

15:44:19 24 Q. So that part of study 114  
15:44:24 25 would have been within your area of

1 DWIGHT E. MATTHEWS - CROSS

15:44:26 2 expertise, right?

15:44:27 3 A. It is.

15:44:28 4 Q. Performing that part of the

15:44:30 5 method would have been your

15:44:32 6 responsibility on this team, correct?

15:44:33 7 A. Correct.

15:44:33 8 Q. So tell me who calculated

15:44:35 9 the doubly labeled water method?

15:44:38 10 A. Myself and Ray Starling.

15:44:42 11 Q. And you would agree that it

15:44:44 12 is important to go back and review data

15:44:46 13 when doubts have been cast on its

15:44:48 14 authenticity, correct?

15:44:49 15 A. Correct.

15:44:50 16 Q. Now another area of data

15:45:00 17 falsified by Dr. Poehlman was data

15:45:02 18 related to --

15:45:03 19 A. First of all, are you

15:45:04 20 suggesting that paper was falsified?

15:45:06 21 I'm left with an odd impression.

15:45:08 22 Q. Let me ask you. Was the

15:45:10 23 paper falsified?

15:45:11 24 A. No.

15:45:13 25 Q. And did you go back and

1 DWIGHT E. MATTHEWS - CROSS

15:45:14 2 review data to resolve doubts cast upon  
15:45:19 3 its authenticity?

15:45:20 4 A. I have. I have gone back to  
15:45:22 5 review our original data and then it  
15:45:25 6 goes next to Ray Starling. The  
15:45:28 7 university actually -- two things  
15:45:30 8 happened. First of all, the person who  
15:45:32 9 made the complaint ended up in my  
15:45:34 10 office I think in November of 2000 for  
15:45:36 11 which we discussed the problem and I  
15:45:40 12 counseled him to go forward to the dean  
15:45:42 13 and make the allegations which led up  
15:45:44 14 to the final result.

15:45:45 15 After the dust settled the  
15:45:48 16 university, the research associate --  
15:45:52 17 the dean of the medical school formed a  
15:45:54 18 panel to review these papers, defining  
15:45:58 19 them as either green, yellow or red.  
15:46:01 20 Green papers were exonerated by  
15:46:04 21 testimony of first or second authors.  
15:46:08 22 Red papers were ones that were known to  
15:46:09 23 be falsified. Yellow were papers that  
15:46:12 24 were defined as could not be told.

15:46:15 25 So I'm vouching for the

1 DWIGHT E. MATTHEWS - CROSS

15:46:18 2 underlying doubly labeled water and I  
15:46:22 3 certainly stand by that.

15:46:25 4 The first author, Ray  
15:46:27 5 Starling is the fellow in the  
15:46:28 6 laboratory who took that doubly labeled  
15:46:30 7 water and ultimately got it into the  
15:46:32 8 final tables. Ray then asserts whether  
15:46:36 9 or not the final table appearing in the  
15:46:39 10 paper is an accurate reflection of the  
15:46:42 11 data that was given to him from our  
15:46:46 12 analytical laboratory which is the  
15:46:48 13 general clinical research center  
15:46:50 14 laboratory.

15:46:50 15 Q. Are you familiar with a New  
15:46:53 16 York Times magazine article in October  
15:46:55 17 2006 on the subject?

15:46:55 18 A. Yes, I am.

15:46:57 19 Q. And do you -- let me ask  
15:47:03 20 you, would you like a copy of it or are  
15:47:05 21 you familiar enough with it?

15:47:06 22 A. I believe I'm familiar.

15:47:08 23 Q. Is it true that the  
15:47:14 24 complainant, the whistleblower, if you  
15:47:17 25 will, in this case, Mr. DeNino,



1 DWIGHT E. MATTHEWS - CROSS

15:47:20 2 approached you? And I'll read from  
15:47:22 3 this, he approached --

15:47:25 4 MR. BARNETT: Excuse me, if  
15:47:26 5 we're going to read from it can counsel  
15:47:27 6 have a copy?

15:47:29 7 THE PRESIDENT: Yes.

15:47:29 8 MR. BARNETT: I'm not  
15:47:30 9 familiar with.

15:47:32 10 THE PRESIDENT: And the  
15:47:33 11 tribunal should have a copy too.

15:47:51 12 Q. Turning your attention to  
15:47:52 13 Page 3 of 10, and I'm reading from  
15:48:02 14 paragraph 4 on Page 3 of 10,  
15:48:05 15 "Emboldened, he approached Dwight  
15:48:08 16 Matthews, a faculty member who shared  
15:48:10 17 lab space with Poehlman. Matthews and  
15:48:14 18 Poehlman had written a number of papers  
15:48:15 19 and grants together over the years and  
15:48:15 20 DeNino worried that Matthews might  
15:48:17 21 alert Poehlman to his suspicions. But  
15:48:17 22 DeNino could not shake the feeling that  
15:48:20 23 Poehlman was hiding something, and he  
15:48:20 24 wanted guidance from a faculty member."

15:48:24 25 Below that it's reported

1 DWIGHT E. MATTHEWS - CROSS

15:48:26 2 "'First, understand that no matter how  
15:48:28 3 you proceed everyone loses,' Matthews  
15:48:28 4 told DeNino when they met to discuss  
15:48:31 5 Poehlman. 'Your career will be ruined  
15:48:33 6 because no one is going to protect you.  
15:48:36 7 The university will come out bad,' he  
15:48:38 8 continued, 'and Eric's reputation will  
15:48:40 9 be destroyed.' He told DeNino he would  
15:48:43 10 have to decide for himself what to do.  
15:48:45 11 As an afterthought, Matthews told me in  
15:48:47 12 a recent interview, he offered 'if  
15:48:48 13 you're going to do something, make sure  
15:48:50 14 you really have the evidence." Are  
15:48:52 15 those statements true?

15:48:53 16 A. In part. So those are  
15:48:55 17 lifted from a telephone interview I did  
15:49:00 18 with is it Jeneen -- what is the  
15:49:02 19 author's name?

15:49:04 20 MR. BARNETT: At this point  
15:49:07 21 let's get a copy for the witness as  
15:49:09 22 well.

15:49:10 23 Q. Does Jeneen Interlandi  
15:49:14 24 refresh your recollection?

15:49:14 25 A. Right.

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15:49:15 2 THE PRESIDENT: Sorry, I  
15:49:16 3 thought you had a copy.

15:49:17 4 A. No, I haven't been given a  
15:49:19 5 copy. I've certainly seen the article.  
15:49:21 6 This is her paraphrasing of a  
15:49:23 7 conversation I had with her by phone.

15:49:25 8 THE PRESIDENT: We're on  
15:49:26 9 Page 3.

15:49:27 10 A. So if you have quotes I  
15:49:28 11 would not call those quotes as word for  
15:49:31 12 word by me, no.

15:49:33 13 Q. But the substance of it is  
15:49:35 14 true?

15:49:35 15 A. The substance that  
15:49:38 16 whistleblowers generally have a  
15:49:40 17 difficult time and that everybody comes  
15:49:43 18 out less than they went in I think is  
15:49:46 19 fair. If you contact Walter DeNino at  
15:49:51 20 this moment he would I think very  
15:49:53 21 clearly agree with you.

15:49:55 22 Q. Did you ever attempt to  
15:49:57 23 assist Mr. DeNino in his allegations  
15:50:00 24 that he believed that there was  
15:50:01 25 something terribly wrong going on at

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15:50:04 2 the laboratory?

15:50:04 3 A. We discussed his data and  
15:50:09 4 the possible difficulties he would have  
15:50:11 5 in making his case. And he went out  
15:50:17 6 and went looking for additional data.  
15:50:20 7 And when he came back with the  
15:50:22 8 additional data he had something that  
15:50:25 9 probably could not be refuted compared  
15:50:28 10 to his original what I would call he  
15:50:31 11 said/she said allegations. That  
15:50:34 12 ultimately, that the first allegation  
15:50:37 13 never caused the conviction. The  
15:50:43 14 second allegation which was the second  
15:50:44 15 set of problems led to the third set.  
15:50:46 16 And it was the third set that caused  
15:50:48 17 the conviction unrelated to the  
15:50:51 18 original concern of Walter.

15:50:55 19 Q. Did you seek to assist him  
15:50:57 20 when he first came to you with his  
15:50:59 21 allegations?

15:51:00 22 A. Yes.

15:51:01 23 Q. And in what way did you seek  
15:51:04 24 to assist him?

15:51:05 25 A. In terms of counseling him

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15:51:06 2 as to what his options are in  
15:51:09 3 proceeding.

15:51:09 4 Q. And that was the extent of  
15:51:10 5 it?

15:51:11 6 A. Correct.

15:51:11 7 Q. And the counseling is  
15:51:14 8 summarized here in this article?

15:51:17 9 A. In part, yes.

15:51:20 10 Q. I'd like to turn your  
15:51:31 11 attention to your witness statement.  
15:51:33 12 If you could turn to Page 13 of that  
15:51:37 13 statement. Oh would the panel like me  
15:51:49 14 to mark The New York Times article as  
15:51:51 15 an exhibit?

15:51:53 16 THE PRESIDENT: Yes, please.

15:51:56 17 MR. SUH: How about Matthews  
15:51:58 18 1?

15:51:58 19 THE PRESIDENT: Very good.

15:52:02 20 MR. SUH: I'll hand mark it  
15:52:03 21 now and then we'll put a label on it  
15:52:05 22 later.

15:52:05 23 THE PRESIDENT: Thank you  
15:52:06 24 very much.

15:52:07 25 (Matthews Exhibit 1 for

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15:52:07 2 identification, New York Times

15:52:19 3 article.)

15:52:19 4 Q. On Page 39 reads, of your  
15:52:22 5 witness statement, another part of the  
15:52:23 6 Landis argument was that the variability  
15:52:25 7 of the carbon 13 measurement of the  
15:52:27 8 5-alpha androstanol was outside of the .5  
15:52:31 9 range established by the LNDD standard  
15:52:33 10 operating protocol. This statement is  
15:52:35 11 not true. The 5-alpha androstanol is  
15:52:37 12 used as a retention time marker not as a  
15:52:40 13 carbon 13 standard except when run with  
15:52:43 14 the Mix Cal Acetate sample." Do you see  
15:52:45 15 that?

15:52:45 16 A. Yes, I do.

15:52:47 17 Q. And what did you look at or  
15:52:49 18 how did you come to conclude that the  
15:52:51 19 5-alpha androstanol is not used to  
15:52:55 20 determine accuracy in the sample run?

15:52:58 21 A. Through conversation with  
15:53:02 22 Larry Bowers, in asking him about that  
15:53:05 23 particular criteria, and then asking  
15:53:08 24 him for data for where that came from.  
15:53:11 25 I don't have anything in my pocket, but

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15:53:14 2 it comes from Larry Bowers.

15:53:17 3 Q. So Larry Bowers, that's the  
15:53:21 4 gentleman seated to your right there?

15:53:22 5 A. Correct.

15:53:22 6 Q. And he's the person that  
15:53:24 7 told you that 5-alpha androstanol is  
15:53:27 8 not used as a measurement for accuracy  
15:53:31 9 within the samples, correct?

15:53:34 10 A. As an isotopic standard  
15:53:36 11 within the runs outside of Mix Cal  
15:53:40 12 Acetate.

15:53:40 13 Q. I'm sorry, your answer was  
15:53:41 14 more precise, yes. For the sample of  
15:53:43 15 runs outside of Mix Cal Acetate it is  
15:53:46 16 not used for accuracy, correct?

15:53:47 17 A. You're again not restating  
15:53:50 18 what I said. As an isotopic standard,  
15:53:54 19 no.

15:53:54 20 Q. And did Larry Bowers give  
15:54:01 21 you documents to support that?

15:54:09 22 A. At this point I've looked at  
15:54:11 23 so many documents that if he referred  
15:54:15 24 me to a document I can't tell you which  
15:54:16 25 document that was.

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15:54:19 2 Q. I sympathize. Does your --

15:54:23 3 A. The net effect is that when  
15:54:24 4 you think about it, from a practical  
15:54:28 5 point of view that makes tremendous  
15:54:29 6 sense. The three out of four criteria  
15:54:32 7 that they're using obviously applies to  
15:54:35 8 the Mix Cal Acetate. In looking  
15:54:38 9 through the documentation of their  
15:54:40 10 protocols I could not find any  
15:54:42 11 reference that suggests that the  
15:54:45 12 5-alpha androstanol was being used as  
15:54:48 13 an isotopic standard outside of the Mix  
15:54:54 14 Cal Acetate.

15:54:54 15 Q. So the fact that you  
15:54:58 16 couldn't find any reference to the fact  
15:55:00 17 that it's not used as an isotopic  
15:55:02 18 standard outside of the Mix Cal Acetate  
15:55:05 19 plus Larry Bowers's statements led you  
15:55:08 20 to have comfort in writing this  
15:55:11 21 sentence beginning "This statement is  
15:55:13 22 not true," correct?

15:55:15 23 A. That I think is probably a  
15:55:17 24 fair summary.

15:55:21 25 Q. And Larry Bowers is who



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15:55:22 2 again? What is his job title?

15:55:24 3 A. I'm not sure of his actual  
15:55:26 4 job title. He's with USADA.

15:55:32 5 Q. And when did you have this  
15:55:34 6 conversation with Larry Bowers?

15:55:36 7 A. Probably a month ago and  
15:55:42 8 then there may have been an earlier  
15:55:43 9 conversation almost somewhere in  
15:55:46 10 September of 2006. But again, that's  
15:55:49 11 getting back far enough I can't  
15:55:52 12 remember.

15:55:53 13 Q. Do you remember when it was  
15:55:54 14 that he told you that the 5-alpha  
15:55:57 15 androstanol was not used as a carbon 13  
15:56:01 16 standard?

15:56:01 17 A. The particular conversation,  
15:56:03 18 no, I do not.

15:56:04 19 Q. And are you being paid in  
15:56:10 20 connection with your appearance here  
15:56:12 21 today?

15:56:12 22 A. Yes, I'm receiving a  
15:56:13 23 consulting fee.

15:56:14 24 Q. And what is the fee?

15:56:16 25 A. The fee is the standard

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15:56:18 2 USADA fee, at least that's what they  
15:56:20 3 tell me, of \$125 per hour.

15:56:23 4 Q. And how many hours have you  
15:56:27 5 spent in preparation for your testimony  
15:56:29 6 here today?

15:56:29 7 A. Well over 100.

15:56:32 8 Q. And leaving aside the  
15:56:36 9 preparation, how many hours have you  
15:56:37 10 accounted for for your attendance here  
15:56:40 11 at the hearing?

15:56:41 12 A. I haven't totalled it up, I  
15:56:43 13 would say about 30 hours so far.

15:56:45 14 Q. And have you been paid for  
15:56:48 15 any of these hours that you've spent  
15:56:50 16 yet?

15:56:50 17 A. No, I have not.

15:56:51 18 Q. Have you submitted a bill?

15:56:52 19 A. No, I have not.

15:56:53 20 Q. Have you run a calculation  
15:56:55 21 of how much you are currently owed?

15:56:57 22 A. No, I have not.

15:56:59 23 Q. Have you had any discussions  
15:57:05 24 with USADA about grants or possible  
15:57:07 25 grants that you might receive from

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15:57:08 2 USADA?

15:57:08 3 A. No, I have not.

15:57:12 4 Q. Have you had any discussions  
15:57:13 5 with USADA about -- excuse me, with  
15:57:16 6 WADA about grants or possible grants  
15:57:18 7 you would receive?

15:57:18 8 A. No, I have not.

15:57:19 9 Q. And how were you approached  
15:57:21 10 in connection with this case?

15:57:22 11 A. As an outside person who has  
15:57:27 12 been doing carbon 13 isotope ratio work  
15:57:31 13 for now going on 30 plus years. My  
15:57:37 14 first association with USADA was a  
15:57:39 15 couple of years ago at a conference  
15:57:41 16 they held in Los Angeles. I can't  
15:57:44 17 remember the exact year, maybe 2005 or  
15:57:47 18 four.

15:58:00 19 Q. Have you ever operated in a  
15:58:01 20 laboratory an IsoPrime instrument?

15:58:03 21 A. SIRA, the precursor to the  
15:58:09 22 IsoPrime.

15:58:10 23 Q. I'm asking about the  
15:58:11 24 IsoPrime.

15:58:11 25 A. Not the IsoPrime per se, no.

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15:58:13 2 Q. And have you ever used the  
15:58:15 3 OS/2 operating software that was  
15:58:17 4 described earlier?

15:58:18 5 A. No, I have not.

15:58:19 6 Q. And do you in fact use a  
15:58:21 7 kind of IRMS instrument?

15:58:24 8 A. A couple of different kinds.

15:58:27 9 Q. And what kind do you use?

15:58:29 10 A. Well, the SIRA 2. That's a  
15:58:31 11 dual viscous leak inlet instrument,  
15:58:34 12 made by VG which --

15:58:35 13 MR. BARNETT: Slow down.

15:58:37 14 A. Okay.

15:58:39 15 THE PRESIDENT: A dual what?

15:58:41 16 A. A VG which is a SIRA 2, it's  
15:58:45 17 a dual viscous inlet instrument. It's  
15:58:49 18 the classic. I have a thermal Finnigan  
15:58:52 19 delta plus that's about 10 years old  
15:58:54 20 now, and if you think OS/2 is bad, this  
15:58:58 21 one's operating on concurrent DOS. And  
15:59:00 22 then we have Europa which is again  
15:59:04 23 another Manchester instrument, actually  
15:59:08 24 Crewe, spun off from a couple of VG  
15:59:11 25 people and that's a continuous flow

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15:59:13 2 instrument as well.

15:59:15 3 Q. On Page 2 you indicate that  
15:59:17 4 your work involves measuring metabolites  
15:59:20 5 and pathways of metabolism in the body  
15:59:22 6 using stable isotope traces, correct?

15:59:26 7 A. Correct.

15:59:27 8 Q. And stable isotope tracers  
15:59:30 9 typically involve compounds that are  
15:59:32 10 highly enriched in carbon 13, correct?

15:59:34 11 A. That is correct.

15:59:35 12 Q. And therefore, the  
15:59:37 13 enrichments that one is monitoring  
15:59:38 14 typically many times exceed those found  
15:59:41 15 in the normal variation in natural  
15:59:42 16 abundance such as the ones in this  
15:59:45 17 case, correct?

15:59:46 18 A. Actually, yes and no. For  
15:59:50 19 example, your muscle turns over very  
15:59:53 20 slowly. If you want to measure how  
15:59:58 21 fast you synthesize protein you need to  
16:00:00 22 incorporate over time enriched amino  
16:00:04 23 acids. If we start with 99 percent  
16:00:05 24 label, that is a particular carbon and  
16:00:08 25 amino acid like leucine, 99 percent

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16:00:12 2 carbon 13 label and I infuse that in  
16:00:14 3 one arm and I can't give it as a big  
16:00:16 4 dose so I have to let the enrichment  
16:00:19 5 drop so it's only maybe one or two  
16:00:22 6 percent of the amino acids in your  
16:00:24 7 blood have a carbon 13 label, now  
16:00:26 8 that's only double natural abundance.  
16:00:28 9 If I do this for about eight or 10  
16:00:30 10 hours and take a muscle biopsy and I  
16:00:32 11 separate that muscle, you will find  
16:00:34 12 that the enrichments are down in the  
16:00:37 13 range of maybe one or two per mil above  
16:00:40 14 natural abundance at best. And that  
16:00:43 15 actually is a tougher measurement to go  
16:00:45 16 up two per mil than it is to go down  
16:00:48 17 six per mil as found in the adverse  
16:00:51 18 sample.

16:00:53 19 Q. Fair to say, however, that  
16:00:55 20 in your studies you were often looking  
16:00:57 21 at peaks with a thousandths per mil  
16:01:03 22 difference in thresholds?

16:01:04 23 A. When we're working with  
16:01:06 24 GC/MS that's certainly fair. And I  
16:01:09 25 would say a lot of the work is done

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16:01:10 2 with GC/MS as well.

16:01:12 3 Q. I'd like to turn your  
16:01:17 4 attention to -- actually, before we go  
16:01:28 5 on, just a few more questions on this  
16:01:32 6 internal standards issue that we just  
16:01:34 7 spoke about. Did you have any  
16:01:35 8 discussions with any of the other  
16:01:37 9 experts or fact witnesses in this case  
16:01:40 10 about what the 5-alpha androstanol AC  
16:01:44 11 is used for at LNDD?

16:01:46 12 A. I probably had that  
16:01:49 13 discussion in one telephone call with  
16:01:52 14 Tom Brenna.

16:01:54 15 Q. And when did that phone call  
16:01:56 16 take place?

16:01:56 17 A. Maybe two weeks ago.

16:01:59 18 Q. And what was the nature of  
16:02:00 19 what was discussed between you and Dr.  
16:02:03 20 Brenna?

16:02:03 21 A. Again, it was trying to get  
16:02:05 22 a sense for how LNDD operates. I'm  
16:02:10 23 somewhat handicapped here because my  
16:02:12 24 French is very, very poor, and it's  
16:02:15 25 hard to kind of read through the LNDD

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16:02:17 2 data pack using a web dictionary in the  
16:02:22 3 process.

16:02:22 4 So guidance is absolutely  
16:02:25 5 essential in trying to get through some  
16:02:29 6 of the nuances of a lot of material and  
16:02:30 7 not end up making a mistake in  
16:02:33 8 interpretation as to what they're  
16:02:34 9 doing.

16:02:35 10 Q. So in that guidance, that  
16:02:37 11 call you had with Tom Brenna, that's  
16:02:40 12 when you discussed that LNDD uses the  
16:02:46 13 5-alpha androstanol AC not as a -- not  
16:02:54 14 as a carbon 13 standard but only as a  
16:02:56 15 retention time marker, correct?

16:02:58 16 A. I don't think I necessarily  
16:03:00 17 phrased the question so explicitly.  
16:03:02 18 But I think I asked him probably half a  
16:03:05 19 dozen questions about the operation of  
16:03:08 20 LNDD as he knew it.

16:03:10 21 Q. And in those -- in the  
16:03:12 22 responses to those questions he also  
16:03:14 23 informed you that LNDD only uses  
16:03:18 24 5-alpha androstanol AC as a retention  
16:03:22 25 time marker, correct?



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16:03:23 2 A. That was his impression as  
16:03:25 3 well.

16:03:25 4 Q. Did you have any discussions  
16:03:26 5 with any other expert witness or fact  
16:03:29 6 witness in this case about how LNDD  
16:03:32 7 uses 5-alpha androstanol AC -- how they  
16:03:37 8 use 5-alpha androstanol AC?

16:03:40 9 A. Prior to the preparation and  
16:03:41 10 submission of the statement on the 7th  
16:03:47 11 of March -- in fact, actually the  
16:03:49 12 conversation with Tom may have actually  
16:03:51 13 occurred afterwards. But no, not prior  
16:03:53 14 to March 7th.

16:03:55 15 Q. And so the only conversation  
16:03:58 16 prior to the preparation of this was  
16:04:00 17 with Larry Bowers, correct?

16:04:01 18 A. Correct.

16:04:04 19 Q. And you've never spoken to  
16:04:06 20 anyone actually at LNDD about what LNDD  
16:04:11 21 uses 5-alpha androstanol AC for?

16:04:14 22 A. No.

16:04:28 23 Q. I'd like to turn your  
16:04:29 24 attention to Page 9 of your declaration  
16:04:32 25 where it says, the section under "Good

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16:04:36 2 controls." And, sir, do you see where  
16:04:47 3 it says "In reviewing LNDD's protocol,  
16:04:50 4 I find their analytical scheme to be  
16:04:52 5 very well thought out with appropriate  
16:04:54 6 control samples added to each assay"?

16:04:59 7 A. Yes, that's the top of the  
16:05:00 8 page?

16:05:01 9 Q. Yes.

16:05:02 10 A. Yes.

16:05:02 11 Q. And that paragraph goes on  
16:05:12 12 to talk about what LNDD does as part of  
16:05:17 13 their analytical scheme, correct?

16:05:19 14 A. Correct.

16:05:19 15 Q. In that paragraph you don't  
16:05:23 16 actually say that LNDD performed the  
16:05:30 17 quality controls in this case well,  
16:05:33 18 right?

16:05:33 19 A. No.

16:05:38 20 Q. You're just saying that  
16:05:41 21 their overall plan of quality control  
16:05:43 22 is a good one?

16:05:45 23 A. That would be fair to say.  
16:05:46 24 Which happens every day they go out and  
16:05:49 25 do their work. As far as I can tell.

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16:05:53 2 If --

16:05:54 3 Q. And --

16:05:55 4 MR. BARNETT: Was the  
16:05:55 5 witness done?

16:05:56 6 THE WITNESS: Yes.

16:05:57 7 Q. When you were analyzing  
16:06:03 8 their quality control or controls in  
16:06:10 9 this case, were you aware that LNDD  
16:06:14 10 technicians would manually process or  
16:06:17 11 integrate their quality controls?

16:06:19 12 A. As you know, this is hard to  
16:06:23 13 glean that information from the  
16:06:25 14 document, I happen to be very fond of  
16:06:28 15 manual integration and I'd be happy to  
16:06:30 16 elaborate why I personally believe in  
16:06:32 17 many respects it is superior to  
16:06:34 18 automatic processing.

16:06:37 19 So with that as a framework,  
16:06:40 20 I'm not upset at manual integration.

16:06:45 21 Q. My question was a little bit  
16:06:46 22 different. My question was at the time  
16:06:48 23 you wrote this were you aware that LNDD  
16:06:50 24 technicians routinely manually  
16:06:55 25 integrate their quality controls?

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16:06:56 2 A. I was.

16:06:57 3 Q. And how were you aware of  
16:06:59 4 that?

16:06:59 5 A. Again, my source of  
16:07:02 6 information, because I have not been to  
16:07:05 7 LNDD, was through Larry Bowers, through  
16:07:10 8 asking him to make clarifications to  
16:07:12 9 issues related to the A and B pack.

16:07:15 10 Q. And I guess while we're on  
16:07:16 11 the subject. What else did Larry  
16:07:19 12 Bowers tell you during the course of  
16:07:21 13 that conversation about what LNDD does?

16:07:25 14 A. Oh, about LNDD. I  
16:07:29 15 personally do not recall. I mean if  
16:07:31 16 you have a specific question I could  
16:07:32 17 certainly answer that.

16:07:34 18 Q. So you don't recall the rest  
16:07:35 19 of the conversation aside from this  
16:07:40 20 issue about the 5-alpha androstanol and  
16:07:43 21 the issue about manually integrating  
16:07:45 22 quality control?

16:07:46 23 A. Well, as I've gone through  
16:07:48 24 this thing again, there are a number of  
16:07:50 25 questions that came up. A lot of them

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16:07:53 2 came up around, you know, particular  
16:07:55 3 words that were in French.

16:07:57 4 Q. I see. Okay. I'd like to  
16:07:59 5 turn your attention to LNDD -- I'm  
16:08:05 6 going to read off the page numbers,  
16:08:07 7 four page numbers and perhaps if the  
16:08:10 8 actual paper documents could be put in  
16:08:11 9 front of Dr. Matthews it would be  
16:08:14 10 easier for him.

16:08:16 11 A. Are these from the A and B  
16:08:18 12 pack?

16:08:18 13 Q. No, sir. They are Exhibit  
16:08:20 14 26, LNDD 298, 301, 304 and 307.

16:08:27 15 A. Run the page numbers by me  
16:08:29 16 again.

16:08:30 17 Q. It's 298.

16:08:35 18 A. 298.

16:08:36 19 Q. 301, 304, 307.

16:08:46 20 A. 307.

16:08:46 21 Q. I'm sorry. Why don't you  
16:08:48 22 take an opportunity to look through  
16:08:49 23 those. Dr. Matthews, can you let me  
16:09:49 24 know when you're ready.

16:09:50 25 A. It will take a couple more

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16:09:51 2 minutes because only that last page is  
16:09:53 3 actually readable.

16:09:54 4 Q. Sure. Maybe you can start  
16:09:56 5 with that one?

16:09:57 6 A. Okay. Let me look at it for  
16:09:59 7 a moment here. Okay.

16:10:21 8 Q. Do you recognize what LNDD  
16:10:23 9 307 is?

16:10:24 10 A. It looks like it's a  
16:10:28 11 certification for a chemical and the  
16:10:30 12 chemical name is presented. The people  
16:10:34 13 it looks like that are certifying the  
16:10:36 14 chemical is a company called Eurofins  
16:10:39 15 analytics. I'm not actually familiar  
16:10:42 16 with them. And they are sending an  
16:10:46 17 acetate which looks like it is for  
16:10:50 18 principles of abbreviation, the 5-beta  
16:10:55 19 Adiol, and they specify how much  
16:11:02 20 they're sending which looks like 10  
16:11:04 21 milligrams. They have a batch. They  
16:11:08 22 appear to suggest a single spot on thin  
16:11:11 23 layer chromatography. It has a  
16:11:17 24 reasonably narrow melting point range.  
16:11:20 25 They give an optical rotation for it

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16:11:23 2 and they give a molecular weight for  
16:11:26 3 the species. There's a date of I  
16:11:30 4 assume reception, which is receipt.  
16:11:32 5 And then the key element I guess you're  
16:11:35 6 probably focusing on at the bottom they  
16:11:37 7 say when they measure it it is minus  
16:11:41 8 16.3 per mil for carbon 13, plus or  
16:11:45 9 minus, and I can't quite see if that's  
16:11:51 10 .3.

16:11:52 11 Q. If you look at the blowup  
16:11:53 12 you can see.

16:11:54 13 A. Ah, 16.3 plus or minus .3.

16:11:59 14 Q. Maybe you could look now at  
16:12:00 15 the other pages that you have.

16:12:21 16 A. So then the 304 -- let's  
16:12:24 17 see. Okay, so 30 -- this thing kind of  
16:12:33 18 wraps itself around, doesn't it. So  
16:12:40 19 the first one looks like -- so the 304,  
16:12:43 20 if I can see that name correctly looks  
16:12:45 21 like the 5-beta Adiol. That's a hard  
16:12:50 22 one to read, isn't it? The first one,  
16:12:54 23 three alpha 1117. So the 307 with the  
16:12:59 24 1117 that might be the ketoetio. Let's  
16:13:10 25 take a look at what else we've got

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16:13:12 2 here.

16:13:12 3 MR. BARNETT: Dr. Matthews,  
16:13:14 4 just let me remind you that the court  
16:13:16 5 reporter is trying to take down all of  
16:13:17 6 your words.

16:13:18 7 A. I'm also muttering as I was  
16:13:21 8 going along.

16:13:22 9 MR. BARNETT: That was kind  
16:13:23 10 of my polite point.

16:13:36 11 A. So we have a series of  
16:13:38 12 standards with carbon 13 cited for each  
16:13:41 13 one of them.

16:13:51 14 Q. Now, with respect to -- now  
16:13:53 15 that you've looked at all of them, if  
16:13:54 16 you could turn to LNDD 306.

16:13:59 17 A. Okay.

16:14:04 18 Q. Also maybe a hard copy would  
16:14:05 19 be easier to see.

16:14:07 20 A. Okay.

16:14:10 21 Q. And LNDD 306 -- well, why  
16:14:13 22 don't you take a minute to read through  
16:14:14 23 that.

16:14:15 24 A. So this is the so-called  
16:14:17 25 MSDS. So that's the ketoetio. Okay.



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16:14:48 2 Okay. Page 306, yes, I've taken a look  
16:14:54 3 through that.

16:14:55 4 Q. You have?

16:14:56 5 A. I have.

16:14:57 6 Q. Do you recognize that Page  
16:15:01 7 306 by an analysis of the molecular  
16:15:05 8 weight is the synonym 11  
16:15:09 9 ketoetiocholanolone acetate?

16:15:13 10 A. Yes.

16:15:13 11 Q. The substance that is  
16:15:15 12 actually the 11 ketoetio in the Mix Cal  
16:15:21 13 Acetate?

16:15:21 14 A. That's the presumption, yes.  
16:15:23 15 Now this one is coming from Steraloid.

16:15:46 16 Q. Would you agree with me that  
16:15:48 17 LNDD 306 is, for purposes of the 11  
16:15:54 18 ketoetiocholanolone acetate, is the  
16:15:58 19 same molecular structure as the 5-beta  
16:16:01 20 androstanol which is listed on LNDD  
16:16:04 21 307?

16:16:04 22 A. Yes. So they give the top  
16:16:08 23 name in IUPAC nomenclature and then you  
16:16:11 24 have to kind of translate it across  
16:16:13 25 with this rattling thing on 307, but it

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16:16:17 2 looks like it lines up to be the same  
16:16:19 3 and molecular weight should also line  
16:16:22 4 up to be the same, okay.

16:16:24 5 Q. Which means your determined  
16:16:26 6 isotopic value of 11 ketoetio would of  
16:16:30 7 course be minus 16.3 also, correct?

16:16:32 8 A. For that particular lot I  
16:16:33 9 would -- yes, okay.

16:16:35 10 Q. Now, I'd like to turn your  
16:16:37 11 attention to USADA 175, that's Exhibit  
16:16:45 12 24. And if you could turn your  
16:16:51 13 attention to the 11 ketoetio column on  
16:16:54 14 the far right-hand side.

16:16:56 15 A. I'm not there yet.

16:17:04 16 Q. Take your time.

16:17:05 17 A. 175?

16:17:07 18 Q. Yes, 175.

16:17:08 19 A. Okay. Okay.

16:17:19 20 Q. And do you recognize USADA  
16:17:23 21 175 as being the results page of the  
16:17:26 22 determination of isotopic value from  
16:17:28 23 the Mix Cal Acetate in sample A?

16:17:32 24 A. So it's definitely Mix Cal  
16:17:41 25 Acetate. It's got a pair of data files

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16:17:44 2 for the determinations I'd have to go  
16:17:46 3 back and see which data files they  
16:17:48 4 translate to, but it does look like it  
16:17:50 5 should be from sample -- from that  
16:17:52 6 sample A series.

16:17:53 7 Q. Right.

16:17:54 8 A. Okay.

16:17:56 9 Q. And then if you look in the  
16:17:57 10 far right column there's a value for 11  
16:18:03 11 ketoetio AC?

16:18:05 12 A. Yes.

16:18:05 13 Q. And can you tell me whether  
16:18:07 14 or not the 11 ketoetiocholanolone AC  
16:18:10 15 was measured within the -- it's  
16:18:15 16 actually the top value, Todd, just the  
16:18:18 17 top two values.

16:18:20 18 A. So the third line down is  
16:18:22 19 the certified value which they've got  
16:18:25 20 typed in, that's the minus 16.3. The  
16:18:28 21 top value for run number 7 is 16.69 and  
16:18:33 22 if my ability to do math is good it's  
16:18:36 23 .39 off.

16:18:39 24 Q. And what data 14?

16:18:43 25 A. And data 14, and maybe

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16:18:45 2 somebody else can help me as to whether  
16:18:46 3 I'm looking at a seven or a one. It  
16:18:49 4 looks like a seven to me. So the one  
16:18:54 5 would be within and the seven would be  
16:18:57 6 within .5 let's say. If I'm doing my  
16:19:03 7 math correct.

16:19:03 8 Q. If it were 16.76 you would  
16:19:06 9 also be out of the --

16:19:08 10 A. Let's see, that would be .46  
16:19:12 11 different.

16:19:13 12 Q. Which is .16 outside of the  
16:19:15 13 measurement?

16:19:17 14 A. I'm sorry, could you come  
16:19:19 15 again.

16:19:19 16 Q. I'm sure your math is better  
16:19:21 17 than mine. If you assume for a minute  
16:19:26 18 and we can actually get this value off  
16:19:28 19 another part of the doc pack, but  
16:19:30 20 assume for a minute this is minus  
16:19:33 21 16.76, is that in or outside of the  
16:19:36 22 determined isotopic value from Eurofins  
16:19:39 23 and Eurofins' measure of uncertainty?

16:19:42 24 A. Oh. Now you're asking a  
16:19:47 25 statistical test.

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16:19:47 2 Q. No, I'm sorry. If I am then

16:19:51 3 I have misasked the question. The

16:19:53 4 question is relatively simple. It's a

16:19:56 5 math question. When you address minus

16:20:01 6 16.69 in run number 7 you indicated

16:20:04 7 that it was .39 outside of the --

16:20:08 8 A. The difference, yes.

16:20:09 9 Q. The difference.

16:20:10 10 A. I didn't say outside, I said

16:20:11 11 the difference between the two values

16:20:13 12 was .39.

16:20:15 13 Q. The difference between the

16:20:17 14 two values of --

16:20:18 15 A. If I subtract 16.3 from

16:20:23 16 16.69, the difference is .39.

16:20:26 17 Q. Right. And if you apply the

16:20:28 18 measure of uncertainty from Eurofins,

16:20:33 19 are you inside or outside of what you

16:20:35 20 are supposed to determine the isotopic

16:20:39 21 value would be?

16:20:40 22 A. I'm within.

16:20:44 23 Q. Okay.

16:20:45 24 A. And can I explain?

16:20:47 25 Q. Sure, maybe I'm

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16:20:48 2 misunderstanding you.

16:20:49 3 A. So now we're back to

16:20:51 4 statistics again. The Eurofins says

16:20:56 5 that they can measure their value to be

16:20:59 6 minus 16.3 plus or minus.3. Now that's

16:21:06 7 either a standard error or a standard

16:21:08 8 deviation. I'd have to go back to that

16:21:10 9 page to figure out which it is. But it

16:21:12 10 has some difference into the final

16:21:14 11 value.

16:21:14 12 Generally --

16:21:16 13 Q. Why don't you go back to the

16:21:17 14 page and check which one it is?

16:21:19 15 A. Let's see. Generally, if it

16:21:21 16 was a -- and they may not actually say.

16:21:23 17 Let's see what they say. Unfortunately,

16:21:26 18 they do not say as to whether that's a

16:21:31 19 standard deviation or a standard error.

16:21:33 20 But let's take the more conservative

16:21:33 21 approach.

16:21:36 22 Q. Which would be?

16:21:36 23 A. To take a standard error

16:21:38 24 which is a narrower range and generally

16:21:41 25 you would have two standard errors as

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16:21:43 2 being approximately 95 percent  
16:21:45 3 confidence limits. So two standard  
16:21:48 4 errors of .3 would be .6. So the 16.3  
16:21:55 5 would have a range that goes up to 16.9  
16:22:01 6 and down to 15.7. Then, and this is  
16:22:08 7 the kicker, we throw on the measure --  
16:22:10 8 the uncertainty in the 16.9 which is a  
16:22:14 9 single determination, so that means  
16:22:16 10 standard deviations apply, not standard  
16:22:19 11 errors, because a standard deviation is  
16:22:21 12 the uncertainty in any single  
16:22:26 13 measurement, whereas the standard error  
16:22:29 14 is the uncertainty in a mean  
16:22:32 15 measurement. So I measure it five --  
16:22:36 16 four times and my standard error cuts  
16:22:39 17 by the square root of the number of  
16:22:41 18 measurements which in this case is  
16:22:43 19 square root of 4, or 2.

16:22:46 20 So I would be comparing a  
16:22:48 21 standard error possibly on the one side  
16:22:50 22 against a standard deviation on the  
16:22:53 23 other. The standard deviation is  
16:22:55 24 already approximately .5 for a single  
16:22:59 25 assay. So this is well within being

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16:23:03 2 similar values.

16:23:06 3 MR. RIVKIN: I'm sorry, I  
16:23:07 4 never took statistics, but why do you  
16:23:09 5 use two of the standard errors rather  
16:23:12 6 than one?

16:23:13 7 THE WITNESS: It's a bell  
16:23:15 8 curve, and it's back to the old IQ.  
16:23:18 9 And I would suggest that you probably  
16:23:20 10 are three or four standard deviations  
16:23:22 11 away from the norm. And the first --

16:23:28 12 MR. RIVKIN: In which  
16:23:29 13 direction?

16:23:30 14 THE WITNESS: When you go  
16:23:31 15 out the standard deviation --

16:23:32 16 MR. BARNETT: I'm not sure  
16:23:33 17 if I should object to that or not.

16:23:36 18 THE WITNESS: Above the  
16:23:37 19 line. As you go out you're asking how  
16:23:40 20 much area, what percentage of the  
16:23:42 21 population is left. And generally we  
16:23:46 22 have criteria of around 95 or 99  
16:23:49 23 percent. So when you hit 95 percent  
16:23:52 24 you've got 95 percent of the population  
16:23:54 25 below you and only 5 percent of the



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16:23:56 2 population above you. And the standard  
16:23:58 3 error for a normal population tells you  
16:24:02 4 that. So two standard errors is  
16:24:05 5 approximately 95 percent. Three  
16:24:07 6 standard errors is approximately 99  
16:24:09 7 percent. Three standard errors also  
16:24:13 8 equate to about 130 IQ by the way.

16:24:18 9 MR. BARNETT: I withdraw my  
16:24:20 10 objection.

16:24:24 11 MR. RIVKIN: Thank you.

16:24:49 12 Q. I'd like to turn your  
16:24:50 13 attention to Page 11.

16:24:52 14 A. That's USADA 11?

16:24:54 15 Q. No, Page 11 of your  
16:24:56 16 declaration.

16:24:56 17 A. Okay.

16:24:57 18 MR. RIVKIN: Sorry, let me  
16:24:58 19 ask another dumb question which may  
16:25:00 20 show that I'm a few standard errors  
16:25:02 21 below the line. If you're going to  
16:25:06 22 apply the plus or minus that way with  
16:25:11 23 respect to the uncertainty in the  
16:25:16 24 isotope value why wouldn't you also  
16:25:20 25 apply that to the delta/delta results?

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16:25:27 2 In other words, if you have -- if you  
16:25:28 3 say that you're only allowed a  
16:25:31 4 variation of 3, or 3.8, and you have  
16:25:38 5 something falling more than 3 points,  
16:25:42 6 why wouldn't you use a standard error  
16:25:44 7 then or a standard deviation if you're  
16:25:48 8 just doing a single calculation as you  
16:25:50 9 explained to vary what the range is?

16:25:56 10 THE WITNESS: It's a very  
16:25:57 11 good question. Here the trouble is is  
16:26:01 12 that most of the time we don't work in  
16:26:03 13 absolutes, we don't have an absolute  
16:26:04 14 number like minus 3, and I'll come back  
16:26:08 15 to that. Here the analytical lab has  
16:26:11 16 made a good attempt to define what the  
16:26:13 17 carbon 13 content of the ketoetio and  
16:26:21 18 they've defined it within .3 per mil  
16:26:23 19 and they've sent it out certified that  
16:26:25 20 way. So you compare the two different  
16:26:27 21 standard errors.

16:26:28 22 In many respects one of the  
16:26:30 23 things I think the LNDD lab does and  
16:26:33 24 they just haven't stated it in a clear  
16:26:35 25 fashion, is do exactly what you

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16:26:37 2 suggest.

16:26:37 3 So if I postulate that the  
16:26:41 4 uncertainty in a measurement by GC  
16:26:45 5 combustion IRMS is approximately .5 or  
16:26:48 6 .4, and I take two measurements and I  
16:26:53 7 take the difference between the two,  
16:26:55 8 that difference has more error in it  
16:26:58 9 than if I took either one of the single  
16:27:01 10 measurements. And it goes up by about  
16:27:03 11 the square root of 2 which is about  
16:27:07 12 1.5. So you take .5 and it now comes  
16:27:11 13 up to about .75. And that may be part  
16:27:15 14 of the rationale for the .8 cutoff that  
16:27:18 15 the delta/delta, if you have an  
16:27:22 16 uncertainty of GC combustion  
16:27:24 17 measurement .4, .5, then the delta/  
16:27:28 18 delta uncertainty will be about .8.

16:27:31 19 Now you compare that against  
16:27:33 20 an absolute value like glucose. If I  
16:27:36 21 say you're diabetic, if you're more  
16:27:39 22 than 5 millimolar when you wake up in  
16:27:41 23 the morning, then I'll measure your  
16:27:43 24 blood and it will have a standard error  
16:27:46 25 associated with it if I measure it

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16:27:48 2 several times and I'll compare it  
16:27:50 3 against that absolute number. The WADA  
16:27:52 4 criteria is one of those absolute  
16:27:55 5 numbers of minus 3. It's one of those  
16:27:57 6 cutoffs. Here it's slightly different  
16:27:59 7 because both this number also, the  
16:28:02 8 minus 16.3 has a little fuzz to it.

16:28:13 9 MR. RIVKIN: I'm not sure I  
16:28:14 10 understand, but I'm not sure more  
16:28:16 11 questions would help. Thank you.

16:28:27 12 Q. Where were we?

16:28:29 13 A. Oh, I think you said Page  
16:28:31 14 11.

16:28:42 15 Q. On Page 11 just above the  
16:28:50 16 cutout of the chromatograph you could  
16:28:54 17 see that there's a sentence, "However,  
16:28:57 18 looking at the FR3 GC/C/IRMS  
16:28:58 19 chromatogram you can see that there is  
16:28:59 20 a relatively unchanging baseline during  
16:29:01 21 the period of measurement of interest."  
16:29:04 22 Do you see that?

16:29:04 23 A. Yes, I do.

16:29:05 24 Q. And how did you determine  
16:29:08 25 that there was a relatively unchanging

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16:29:10 2 baseline during the period of  
16:29:11 3 measurement of interest?

16:29:13 4 A. In this particular case,  
16:29:15 5 it's eyeball and a little ruler.

16:29:19 6 Q. So you just looked at it,  
16:29:20 7 correct?

16:29:21 8 A. Well you take a little ruler  
16:29:23 9 and, you know, a little millimeter  
16:29:25 10 ruler because this is about as good as  
16:29:28 11 I could get it blown up and you look to  
16:29:30 12 see what it is at the front, you look  
16:29:32 13 to see what it is at the back and you  
16:29:33 14 look to see how much time is elapsed so  
16:29:35 15 you have a little bit of a slope.

16:29:37 16 Now the context of this  
16:29:39 17 statement was in reference to the  
16:29:42 18 sloping baselines that I had read in  
16:29:44 19 the appeal where if you take a look at  
16:29:47 20 the whole chromatogram, in the front on  
16:29:50 21 several of them is considerably higher  
16:29:52 22 than it is after the instrument has  
16:29:55 23 settled down, the comment is true.

16:30:01 24 But the main point is it's  
16:30:03 25 the region of measurement interest that

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16:30:05 2 we need to look at and when you strip  
16:30:06 3 away that front end and you look just  
16:30:09 4 at the region of interest as I think  
16:30:11 5 the panel can probably see, the front  
16:30:14 6 end does not appear to be substantially  
16:30:17 7 higher than the back end.

16:30:20 8 Q. I'd like to turn your  
16:30:21 9 attention to USADA 350. Do you  
16:30:28 10 recognize that USADA 350 are the data  
16:30:30 11 processing results that match that  
16:30:37 12 chromatograph?

16:30:50 13 A. Just a second. No, they are  
16:30:54 14 not.

16:30:58 15 Q. Do you see at the top it  
16:31:03 16 says sample 995474 F3?

16:31:07 17 A. I do. And it says data file  
16:31:09 18 11. And then on the prior page if I'm  
16:31:13 19 correct, unless I'm missing something  
16:31:15 20 here, the prior page says data file 11,  
16:31:20 21 and when you look down at the three  
16:31:27 22 numbers minus 28.79, minus 31.88 and  
16:31:31 23 minus 26.12, those are not the same  
16:31:35 24 numbers as in the figure.

16:31:41 25 Now let's see if I've

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16:31:43 2 errored in what figure I've pulled.

16:31:53 3 Q. I'm sorry, excuse me, I've  
16:31:54 4 given you -- I've accidentally swapped  
16:31:58 5 A and B. Let me turn your attention to  
16:32:01 6 USADA 172. Let's start with the --  
16:32:03 7 we'll go back to the F3. But your  
16:32:06 8 conclusion about relatively unchanging  
16:32:08 9 baseline applies to both F3 fractions,  
16:32:12 10 correct?

16:32:12 11 A. Hold on. So what page am I  
16:32:16 12 turning to, sir?

16:32:17 13 Q. Before we get there I just  
16:32:19 14 want to make sure so that there's no  
16:32:20 15 confusion, that your conclusion written  
16:32:22 16 in your declaration applies to both the  
16:32:25 17 A and B F3 chromatograms, that there is  
16:32:31 18 a relatively unchanging baseline,  
16:32:33 19 correct?

16:32:33 20 A. Versus a, quote, sloping  
16:32:36 21 baseline, yes.

16:32:38 22 Q. So now let's turn to USADA  
16:32:41 23 172. Do you recognize USADA 172 as  
16:32:48 24 being the --

16:32:54 25 A. Yes, I do.

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16:32:56 2 Q. Now, if you could go look at  
16:32:58 3 where it says carbon 13 -- well, let me  
16:33:02 4 just read out the column name, dC13Bkd.

16:33:08 5 A. I'm sorry, D13cpk.

16:33:15 6 Q. Bkd?

16:33:16 7 A. Oh, Bkd, yes.

16:33:19 8 Q. Short for background. If  
16:33:22 9 you could highlight the values minus  
16:33:25 10 51.12 and the one above it, minus 53.62  
16:33:29 11 -- the one above that one. Right. Do  
16:33:34 12 you recognize comparing it to the  
16:33:38 13 chromatogram that those two values are  
16:33:40 14 associated with the background  
16:33:47 15 calculation of the area of interest?

16:33:50 16 A. Well, it's one of those  
16:33:52 17 apples and orange things you're trying  
16:33:55 18 to talk about here. The figure is the  
16:34:00 19 trace of 44 and its intensity. This is  
16:34:05 20 the delta 13 C that is the ratio, the  
16:34:08 21 two to one trace if you will, or the 45  
16:34:10 22 to 44 trace. And what happens is that  
16:34:13 23 when you get down to zero background  
16:34:16 24 you've got basically nothing, you're  
16:34:18 25 down to what the head amplifiers read



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16:34:20 2 and the head amplifiers have a little  
16:34:22 3 offset which they need to have so they  
16:34:25 4 stay above zero and you're getting down  
16:34:27 5 close to nothing. And the ratio is the  
16:34:31 6 ratio of nearly nothing changing.

16:34:38 7 Q. So do you see that the two  
16:34:40 8 rows between the two peaks here show a  
16:34:45 9 background change of 2.5 per mil?

16:34:47 10 A. I see that number, yes.

16:34:49 11 Q. And would you agree that  
16:34:53 12 that 2.5 per mil constitutes a change  
16:34:59 13 in baseline from the two peaks that it  
16:35:02 14 references?

16:35:03 15 A. No, not a significant change  
16:35:04 16 in baseline, no, I would not, not from  
16:35:06 17 that -- not from that column. That  
16:35:08 18 column becomes very deceiving because  
16:35:10 19 it's a ratio column and if I have a  
16:35:14 20 number of .001 and .00001, I have a  
16:35:20 21 ratio of 10. And if one of those  
16:35:22 22 changes to be .0015 I now have a ratio  
16:35:26 23 of 15. Very little change in those  
16:35:30 24 numbers, but a big change in the ratio.

16:35:33 25 Q. Are you aware that when

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16:35:36 2 using the IsoPrime that the head  
16:35:38 3 amplifier offset is removed prior to  
16:35:41 4 the background subtraction taking  
16:35:44 5 place?

16:35:44 6 A. I'm not absolutely positive.

16:35:46 7 Q. If that were true, would  
16:35:47 8 that change your opinion?

16:35:48 9 A. Yes and no. There would be  
16:35:53 10 -- there's no way to offset the head  
16:35:56 11 amplifier's -- there's always going to  
16:35:58 12 be some residual signal. Some of it is  
16:36:02 13 chemical and what you have to do, put  
16:36:04 14 in a set value to knock that out.  
16:36:05 15 Either way, you still end up with a  
16:36:08 16 very little -- very little background,  
16:36:10 17 very little background that has --  
16:36:12 18 small swings in very little background  
16:36:15 19 could have big effects on the ratio,  
16:36:17 20 but they have no significant effects on  
16:36:19 21 the peak.

16:36:20 22 This is an apples and orange  
16:36:23 23 comparison in my -- from the way I've  
16:36:26 24 written my statement because we're  
16:36:28 25 talking about the intensity of the 44

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16:36:30 2 being through that period of time and  
16:36:33 3 the delta 13 C background ratio doesn't  
16:36:37 4 accurately reflect it.

16:36:39 5 Q. So is it fair to say from  
16:36:41 6 your earlier description that you did  
16:36:43 7 not even look at these values when you  
16:36:45 8 were calculating or making your  
16:36:48 9 determination that there was a  
16:36:50 10 relatively unchanging baseline during  
16:36:52 11 the period of the measurement of  
16:36:53 12 interest?

16:36:54 13 A. The statement was made  
16:36:55 14 because the Appellant's appeal brief  
16:37:02 15 that suggested that sloping baselines  
16:37:04 16 was seriously distorting the values  
16:37:06 17 that were measured in this case, and  
16:37:09 18 while -- and if you take a closer look  
16:37:12 19 visually as per that figure, you don't  
16:37:16 20 see what I would call as the  
16:37:19 21 significant sloping baseline that was  
16:37:22 22 purported.

16:37:25 23 Q. My question is whether or  
16:37:26 24 not you viewed the data which is on  
16:37:29 25 Page USADA 172 prior to making your

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16:37:32 2 conclusion that there's a relatively  
16:37:34 3 unchanging baseline?

16:37:35 4 A. I'm not sure I follow your  
16:37:37 5 question.

16:37:38 6 Q. I'll ask it again. Before  
16:37:40 7 you reached your conclusion -- earlier  
16:37:43 8 you testified that you determined that  
16:37:45 9 there is a relatively unchanging  
16:37:47 10 baseline by looking at it and using a  
16:37:49 11 ruler. During that process did you  
16:37:52 12 look at the actual data that's on USADA  
16:37:55 13 172 prior to writing this down in your  
16:37:58 14 declaration?

16:37:58 15 A. The data on 172 is not very  
16:38:02 16 helpful in reaching that conclusion,  
16:38:06 17 no. There's nothing I can glean from  
16:38:08 18 the way the data's printed in this case  
16:38:11 19 to --

16:38:11 20 Q. So you did look at it or you  
16:38:13 21 didn't look at it?

16:38:14 22 A. Yes, I did look at that  
16:38:15 23 page.

16:38:15 24 Q. You did look at it.

16:38:19 25 A. Again, the context is the

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16:38:21 2 issue of whether there is a significant  
16:38:23 3 sloping baseline that is causing  
16:38:25 4 significant errors to be embedded into  
16:38:27 5 the measurements, and my position is  
16:38:30 6 no, there is not.

16:38:35 7 Q. Why don't you tell me how  
16:38:36 8 the background is plotted and  
16:38:38 9 determined using the IsoPrime 2 and the  
16:38:41 10 OS/2 software?

16:38:45 11 MR. YOUNG: You mean the  
16:38:46 12 IsoPrime 2?

16:38:47 13 Q. Excuse me, the IsoPrime 1.

16:38:49 14 A. First of all, we don't have  
16:38:50 15 one of those traces up here. There are  
16:38:52 16 other traces. And since I did not  
16:38:55 17 write the software I could not vouch  
16:38:57 18 for the authors.

16:38:58 19 In general, or in practice,  
16:39:02 20 you take --

16:39:03 21 Q. I'm sorry, I'm not asking  
16:39:04 22 for in general or for in practice. I'm  
16:39:06 23 asking how the IsoPrime 1 and the OS/2,  
16:39:11 24 1.67 software calculates the  
16:39:14 25 background?

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16:39:14 2 A. Well, I guess there's two  
16:39:16 3 ways of looking at it. One way of  
16:39:18 4 looking at it is how it should be done  
16:39:20 5 and the other way would be how it  
16:39:21 6 shouldn't be done.

16:39:22 7 Q. Well --

16:39:23 8 A. I can tell you how it should  
16:39:24 9 be done. And if the IsoPrime pulls a  
16:39:27 10 rabbit out of its hat and does it  
16:39:29 11 differently then I wouldn't be too  
16:39:31 12 happy.

16:39:33 13 The bottom line is --

16:39:34 14 Q. The question is how it was  
16:39:35 15 done?

16:39:35 16 A. You want the intensity of  
16:39:37 17 one being divided by the other.

16:39:38 18 Q. Do you know how it was done  
16:39:39 19 by the IsoPrime 1 and the OS/2  
16:39:43 20 software?

16:39:43 21 A. No.

16:39:46 22 Q. All right. Turning to your  
16:40:35 23 declaration Page 10 where it begins  
16:40:38 24 "Good chromatography," is it your  
16:41:08 25 testimony that the chromatography in

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16:41:10 2 this case was of good and reliable  
16:41:12 3 quality?

16:41:13 4 A. Specifically for the A and B  
16:41:17 5 samples of what, the 995474?

16:41:21 6 Q. Yes. All the -- all of  
16:41:26 7 the --

16:41:26 8 A. Of the 995474 A and B that  
16:41:30 9 appears in the doc packs, the A and B  
16:41:36 10 doc packs I'm comfortable with those F3  
16:41:39 11 analyses and specifically the F3 which  
16:41:43 12 produced the adverse event.

16:41:45 13 Q. Are you comfortable with all  
16:41:47 14 of the runs within that sample? And by  
16:41:51 15 runs within the sample, just so we're  
16:41:53 16 talking about the same thing, I mean  
16:41:55 17 the blank F3, the -- of course you just  
16:41:59 18 spoke about the F3, the blank F1, the  
16:42:03 19 actual sample F1, the blank F2 and the  
16:42:06 20 actual sample F2 for both A and B?

16:42:09 21 A. Given that the adverse  
16:42:12 22 finding is based on the F3, my  
16:42:16 23 attention has been focused heavily on  
16:42:19 24 the F3. I have focused far less  
16:42:24 25 heavily on the F1 or the F2.

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16:42:28 2 Q. And the blanks associated  
16:42:29 3 with those?

16:42:30 4 A. And the blank with F3. So  
16:42:32 5 the F3 fractions for which there would  
16:42:35 6 be four analyses is what I have -- four  
16:42:43 7 chromatograms is what I have focused  
16:42:44 8 on.

16:42:44 9 Q. Did you not look at the  
16:42:46 10 other fractions?

16:42:46 11 A. I have looked at the other  
16:42:48 12 fractions.

16:42:49 13 Q. Do you have the same  
16:42:50 14 conclusion about the chromatography in  
16:42:51 15 F1 and F2 and blank F1 and F2 for  
16:42:55 16 sample A and B?

16:42:56 17 A. I do not have a determinant  
16:42:58 18 opinion about those other fractions.

16:43:01 19 Q. What do you mean that you  
16:43:02 20 don't have a determinant opinion about  
16:43:04 21 those fractions?

16:43:04 22 A. Meaning that I haven't spent  
16:43:06 23 the time to go through them in detail  
16:43:10 24 as I have gone through the F3.

16:43:12 25 Q. Did you see anything in the



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16:43:15 2 chromatography of the other fractions or  
16:43:18 3 their corresponding blanks which you  
16:43:21 4 believed constituted poor chromatography?

16:43:26 5 A. That's again one of those  
16:43:28 6 wonderfully subjective terms, poor  
16:43:31 7 chromatography, good chromatography,  
16:43:35 8 whether there's a baseline or not a  
16:43:37 9 baseline. So it's a little bit  
16:43:38 10 subjective, but depending on how you  
16:43:40 11 define poor you can find examples,  
16:43:43 12 regions of almost all of the  
16:43:46 13 chromatograms, including the 995474 F3  
16:43:53 14 where the chromatogram is crowded or  
16:43:55 15 has a higher than desirable baseline,  
16:43:58 16 yes.

16:43:59 17 Q. And when you say crowded you  
16:44:01 18 are referring to peaks crowding close  
16:44:03 19 together so that there is a co-elution  
16:44:06 20 issue, correct?

16:44:07 21 A. Potential co-elution. Or  
16:44:09 22 more the point, makes it more difficult  
16:44:11 23 as well to do an integration.

16:44:13 24 Q. And when you say makes it  
16:44:15 25 more difficult to do an integration you

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16:44:17 2 mean makes it more difficult to do a  
16:44:19 3 manual integration or an automatic  
16:44:21 4 integration or just an integration?

16:44:23 5 A. Both would have the same  
16:44:25 6 problems.

16:44:25 7 Q. And have you seen these --  
16:44:29 8 so you've seen these issues at least in  
16:44:31 9 parts of all of the chromatograms, is  
16:44:33 10 that a fair summary of what you just  
16:44:35 11 said?

16:44:35 12 A. Unless we go through it,  
16:44:39 13 which we could do, each one of them  
16:44:40 14 individually, I wouldn't make such a  
16:44:43 15 summary judgment.

16:44:45 16 Q. Let me ask you this. As a  
16:44:47 17 general principle, are you comfortable  
16:44:49 18 with the statement that in a single  
16:44:52 19 chromatogram, if there are areas in  
16:44:55 20 that chromatogram that show poor  
16:44:58 21 chromatography, that other parts of the  
16:45:01 22 chromatogram are still capable of  
16:45:03 23 determining an adverse analytic finding  
16:45:06 24 and of course the adverse analytic  
16:45:08 25 finding results in actual suspension or

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16:45:12 2 other ramifications? Are you  
16:45:15 3 comfortable with that?

16:45:15 4 A. I'm -- I'm very well aware  
16:45:18 5 of the gravity of this hearing and its  
16:45:23 6 effect on Mr. Landis. But I'm  
16:45:25 7 comfortable with what I've seen with  
16:45:27 8 regard to the F3 fractions, yes.

16:45:29 9 Q. So I mean let me just get  
16:45:32 10 back to the -- I want to make sure  
16:45:34 11 you're answering the question I'm  
16:45:35 12 asking because it's rather specific.  
16:45:38 13 If a single chromatogram has areas of  
16:45:41 14 poor chromatography is it still  
16:45:44 15 acceptable in your mind to rely on  
16:45:47 16 other areas in that same chromatogram  
16:45:50 17 that may not have issues that you see  
16:45:54 18 in other parts of it?

16:45:56 19 A. From a practical point of  
16:45:59 20 view, almost every real sample has  
16:46:02 21 areas of a chromatogram that are not  
16:46:03 22 all that great. And the job of the  
16:46:08 23 chromatographer is to set up the method  
16:46:13 24 so that the area of interest is as  
16:46:19 25 clean and neat and tidy as possible.

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16:46:22 2 Q. Do you believe -- I'm going  
16:46:26 3 to ask the same question again because  
16:46:28 4 I don't know that I'm perhaps being  
16:46:30 5 specific enough. Let me ask you this.  
16:46:32 6 With respect to any of the  
16:46:34 7 chromatograms that you have seen in A  
16:46:36 8 or B sample, and we can go through them  
16:46:39 9 in a minute, but with respect to any of  
16:46:41 10 those chromatograms, would you find it  
16:46:42 11 acceptable to rely on the -- would you  
16:46:49 12 find it acceptable to -- if there were  
16:46:54 13 poor chromatography in one portion of  
16:46:56 14 it to then rely on another portion of  
16:46:58 15 the same chromatogram to declare an  
16:47:05 16 adverse analytic finding?

16:47:07 17 A. I think I made that answer  
16:47:10 18 just a moment ago, which is yes, I am  
16:47:13 19 comfortable.

16:47:13 20 Q. You are comfortable with  
16:47:14 21 that?

16:47:15 22 A. I am.

16:47:16 23 Q. As a principle?

16:47:17 24 A. Unfortunate as it may be,  
16:47:19 25 yes, I am.

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16:47:20 2 Q. And poor chromatography,  
16:47:22 3 would you agree with me, is at least  
16:47:24 4 partially the result of having a poor  
16:47:29 5 cleanup process in the sample prep?

16:47:32 6 A. Not necessarily, no.

16:47:35 7 Q. Would you agree with me that  
16:47:37 8 it is certainly one of the potential  
16:47:39 9 reasons for poor chromatography?

16:47:44 10 A. If there are a hundred  
16:47:47 11 reasons for poor chromatography then  
16:47:50 12 that is certainly one of those reasons.

16:47:54 13 Q. Have you come to a  
16:47:56 14 conclusion after reviewing the  
16:47:58 15 chromatography in sample A and B as to  
16:48:00 16 what some of the reasons could possibly  
16:48:02 17 be for the poor chromatography in those  
16:48:03 18 samples?

16:48:08 19 A. Well, I think you're trying to  
16:48:10 20 put different words into my mouth.  
16:48:11 21 You're suggesting that the chromatography  
16:48:12 22 is poor. And, for example, the Page 11  
16:48:18 23 figure that I just had up I don't think  
16:48:20 24 that region of the chromatogram is poor.

16:48:40 25 MR. SUH: Could you read

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16:48:41 2 back my question, please.

16:48:42 3 (Record read as requested.)

16:48:43 4 MR. BARNETT: I'll object to  
16:48:44 5 mischaracterization of his testimony. He  
16:48:46 6 didn't say there was poor chromatography  
16:48:48 7 of the A and B samples. He declined the  
16:48:50 8 opportunity to make such a broad  
16:48:52 9 statement.

16:49:03 10 Q. Dr. Matthews, what would  
16:49:06 11 your answer be to the question?

16:49:07 12 A. I believe I answered the  
16:49:08 13 question.

16:49:08 14 Q. Let me show you not just a  
16:49:12 15 little cutout of the chromatogram  
16:49:17 16 there. This is -- let me show you  
16:49:22 17 USADA 349, which is Exhibit 25.

16:49:36 18 A. I'm sorry, USADA 349?

16:49:38 19 Q. Yes.

16:49:38 20 A. Okay. Okay.

16:49:50 21 Q. Would you agree with me that  
16:49:53 22 the area around the beginning part of  
16:49:58 23 that chromatogram is an example of poor  
16:50:02 24 chromatography?

16:50:07 25 MR. SUH: Actually, Todd, if

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16:50:09 2 you could just show the whole  
16:50:11 3 chromatogram so we could get scale. We  
16:50:14 4 can look at it closer as we go on.

16:50:16 5 Q. That beginning part of it?

16:50:19 6 A. Of those subjective words  
16:50:21 7 between ideal, poor and bad I would put  
16:50:27 8 this in the poor versus the bad or the  
16:50:30 9 ideal category.

16:50:33 10 Q. And based upon your review  
16:50:38 11 of this chromatogram, do you have any  
16:50:40 12 opinion as to why the chromatography,  
16:50:46 13 that that part of that chromatogram  
16:50:48 14 shows poor chromatography?

16:50:49 15 A. Why do there appear to be  
16:50:51 16 multiple little peaks? No, I do not,  
16:50:53 17 without going through the GC/MS data,  
16:50:57 18 and I don't have access to those files.

16:51:02 19 Q. Would you agree with me that  
16:51:10 20 one of the potential reasons for this  
16:51:12 21 poor chromatography in this area is a  
16:51:16 22 failure of sample prep to clean up the  
16:51:21 23 sample?

16:51:22 24 A. No, I wouldn't. I think  
16:51:29 25 there's probably a far less onerous way

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16:51:32 2 of putting it. The sample preparation  
16:51:36 3 has done a wonderful job.

16:51:38 4 Q. How do you know that?

16:51:39 5 A. Because I don't see a big  
16:51:41 6 glucose peak in there. I don't see a  
16:51:43 7 lot of fatty acid peaks in there. I  
16:51:46 8 don't see a lot of other things in  
16:51:48 9 there. So it's already cleaned up a  
16:51:50 10 ton. But even as you clean and you  
16:51:52 11 clean and you clean no matter what type  
16:51:55 12 of analyte you're trying to get, you  
16:51:57 13 generally have other stuff of a similar  
16:51:59 14 assay class along with it. This  
16:52:07 15 particular style of assay is very good  
16:52:09 16 for trying to narrow the field down to  
16:52:12 17 conjugated steroids, but it's still  
16:52:15 18 limited as to -- there's still a lot of  
16:52:18 19 little things that can be there that  
16:52:20 20 fit within that same framework.

16:52:23 21 Q. And so what are in your mind  
16:52:25 22 some of the possible reasons for the  
16:52:27 23 poor chromatography because you seem to  
16:52:30 24 have ruled out at least one?

16:52:31 25 A. For the extra peaks?



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16:52:32 2 Q. Yes.

16:52:33 3 A. Probably a variety of little  
16:52:35 4 steroid metabolites that have a  
16:52:37 5 potential to be there in minor amounts.  
16:52:40 6 These are lower molecular weight, a  
16:52:43 7 little bit lower, a little bit simpler,  
16:52:45 8 and the people who would be best able  
16:52:49 9 to answer that question would be  
16:52:51 10 probably Cedric Shackelton, for  
16:52:56 11 example, who could list a myriad of  
16:52:58 12 metabolites that could possibly be  
16:53:00 13 there.

16:53:01 14 Q. And it's your testimony that  
16:53:03 15 you would be comfortable in a situation  
16:53:04 16 like this relying on another part of  
16:53:06 17 the chromatogram even though there's  
16:53:08 18 poor chromatography in at least one  
16:53:09 19 part of it?

16:53:10 20 A. Even though the front end  
16:53:11 21 does not look as nice, I'm less  
16:53:13 22 concerned. In fact, one could start  
16:53:17 23 the analysis at 1200 seconds and we'd  
16:53:21 24 not see it at all. We could also start  
16:53:24 25 it earlier. The laboratory has set it

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16:53:26 2 up to do this way and it seems  
16:53:29 3 perfectly reasonable because in the  
16:53:32 4 area of interest the peaks in this  
16:53:41 5 particular chromatogram look pretty  
16:53:43 6 good.

16:54:00 7 MR. SUH: No further  
16:54:01 8 questions.

16:54:03 9 THE PRESIDENT: Mr. Barnett.

16:54:06 10 REDIRECT EXAMINATION

16:54:09 11 BY MR. BARNETT:

16:54:09 12 Q. Dr. Matthews, let me just  
16:54:14 13 ask you about, and if we could bring  
16:54:16 14 that chromatogram back up, USADA 349.  
16:54:32 15 And for the record, I'm an English  
16:54:34 16 major so this is going to be an English  
16:54:36 17 major attempt at science, so bear with  
16:54:38 18 me. But I'm wondering just how  
16:54:41 19 complicated we're making this. If that  
16:54:44 20 chromatogram is like a crowded room, a  
16:54:46 21 roomful of people and the front half of  
16:54:48 22 the room is crowded it may be difficult  
16:54:51 23 to identify people in the front half of  
16:54:54 24 the room. If the second half of the  
16:54:55 25 room has very few individuals in it it

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16:54:57 2 would then be easy to identify people  
16:54:59 3 in the second half of the room; is that  
16:55:00 4 a fair analogy?

16:55:01 5 A. I'm surprised you don't say  
16:55:07 6 he's leading the witness.

16:55:09 7 Q. We're allowed to ask you  
16:55:11 8 hypotheticals. And they're taking pity  
16:55:13 9 on the English major.

16:55:14 10 A. It's just another way of  
16:55:16 11 saying the same thing I think I already  
16:55:17 12 said which is there's an area of the  
16:55:19 13 room that we need to focus on and that  
16:55:24 14 is relatively uncrowded.

16:55:27 15 Q. You are an NIH reviewer; is  
16:55:29 16 that correct?

16:55:29 17 A. Yes, I also chair a study  
16:55:32 18 section.

16:55:32 19 Q. As part of that job do you  
16:55:34 20 approach the documents sent to you by  
16:55:36 21 NIH with a certain amount of scientific  
16:55:38 22 skepticism?

16:55:40 23 A. The same thing you do as  
16:55:42 24 with manuscripts. And that, you know,  
16:55:45 25 that's what happens when the A and B

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16:55:47 2 doc packs were sent to me I think back  
16:55:49 3 in September of 2006. You look to see  
16:55:52 4 what's wrong with them, you know,  
16:55:54 5 because you know there's got to be  
16:55:55 6 stuff wrong and what you're going to do  
16:55:57 7 is you're going to find what's wrong.

16:55:59 8 And in going through the doc  
16:56:01 9 packs, you know, I can find things like  
16:56:04 10 the front end of this chromatogram that  
16:56:06 11 doesn't look so great. But as you  
16:56:08 12 start to get down to the meat of the  
16:56:10 13 issue and you keep your eye focused on  
16:56:13 14 what's leading to the adverse events  
16:56:14 15 and you do your own calculations,  
16:56:16 16 taking this raw data and then redoing  
16:56:19 17 it yourself and looking at it this way  
16:56:20 18 and looking at it that way, it all  
16:56:22 19 keeps stacking back up to the same  
16:56:24 20 conclusion, that the minus 6-ish per  
16:56:27 21 mil in the 5-alpha Adiol is a real  
16:56:32 22 measurement with real uncertainties  
16:56:36 23 that are limited well beyond the scope  
16:56:39 24 of the minus 3 cutoff.

16:56:42 25 Q. Has anything you've heard as

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16:56:44 2 you witnessed the testimony this week  
16:56:46 3 changed the conclusions set forth in  
16:56:49 4 your witness statement and your  
16:56:51 5 rebuttal witness statement?

16:56:52 6 A. No, I've learned a lot more  
16:56:54 7 about how LNDD operates. You know,  
16:56:57 8 they do it differently than we do it.  
16:56:59 9 They're French, if you will. But it's  
16:57:01 10 a different system. So what we call  
16:57:05 11 SOPs and we have FDA sitting on top of  
16:57:10 12 us and other kinds of regional people  
16:57:13 13 that watch after us, there it's  
16:57:17 14 different in France than here and so I  
16:57:18 15 got a fairly good education about how  
16:57:21 16 LNDD does their work. And overall I've  
16:57:24 17 been more impressed. It's just a  
16:57:29 18 difference in approach from how we may  
16:57:31 19 do it in the US under our regulatory  
16:57:33 20 system.

16:57:34 21 Q. And between two concepts,  
16:57:39 22 one, how they do their work and two,  
16:57:41 23 whether or not the results reached were  
16:57:43 24 accurate, which is more important to  
16:57:45 25 you in the context of your expert

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16:57:47 2 testimony for this panel?

16:57:48 3 A. How they do their work helps  
16:57:51 4 assure the accuracy.

16:57:53 5 Q. And are you comfortable with  
16:57:54 6 the accuracy, once again?

16:57:56 7 A. Yes, I'm comfortable with  
16:57:58 8 the accuracy.

16:58:01 9 MR. BARNETT: Nothing  
16:58:01 10 further.

16:58:09 11 THE WITNESS: Is it possible  
16:58:11 12 to make one response to the first  
16:58:13 13 question about Eric Poehlman?

16:58:15 14 THE PRESIDENT: Certainly.

16:58:17 15 THE WITNESS: Because this  
16:58:18 16 was -- it's certainly a public record  
16:58:21 17 that I assisted in the prosecution of  
16:58:32 18 Eric Poehlman and have been active in  
16:58:35 19 sifting through all of the papers that  
16:58:36 20 he has published. What the review has  
16:58:39 21 shown is that no paper that was under  
16:58:41 22 my control, when we did the data in our  
16:58:44 23 general clinical research center  
16:58:46 24 laboratories, has ever been shown to  
16:58:48 25 have any doubt whatsoever. The papers

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16:58:51 2 that have been retracted have no  
16:58:53 3 association with me. And sad as it is  
16:58:57 4 to see a colleague end up where he  
16:59:00 5 ended up, it was a fair settlement and  
16:59:04 6 did not involve me personally in terms  
16:59:07 7 of my science other than having to  
16:59:11 8 assist in providing the evidence that  
16:59:14 9 eventually did cause his conviction.

16:59:21 10 MR. RIVKIN: Dr. Matthews,  
16:59:23 11 if I could refer you to Page 13 of your  
16:59:26 12 original statement. I hate to raise  
16:59:37 13 the subject again, but I'm still trying  
16:59:38 14 to figure it out. In the second full  
16:59:42 15 paragraph on this page you refer to the  
16:59:48 16 Landis argument about the variability  
16:59:50 17 of the internal standard being outside  
16:59:52 18 the 0.5 percent range, 5 per mil range  
17:00:00 19 I guess, right.

17:00:03 20 THE WITNESS: Yes.

17:00:03 21 MR. RIVKIN: And your answer  
17:00:06 22 to that is that it was being used as a  
17:00:09 23 retention time marker not as a  
17:00:12 24 standard.

17:00:12 25 THE WITNESS: Correct.

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17:00:13 2 MR. RIVKIN: Your answer  
17:00:16 3 isn't that the range actually is a  
17:00:24 4 standard error range and therefore it  
17:00:27 5 actually falls within the range because  
17:00:34 6 the range is actually more than the  
17:00:36 7 0.5, it's 1.0.

17:00:38 8 THE WITNESS: I mean the --  
17:00:40 9 first of all, let me -- let me correct  
17:00:42 10 myself. I think if I rewrote that  
17:00:44 11 first sentence I would certainly have  
17:00:47 12 toned down how strong it is in terms of  
17:00:50 13 where I got the information about the  
17:00:52 14 half per mil for the androstanol.  
17:00:57 15 However, when you think about it,  
17:01:00 16 nonetheless, even if I got the original  
17:01:02 17 information as to why they put the  
17:01:04 18 androstanol in there, if you think  
17:01:07 19 about how the method got set up. The  
17:01:10 20 people that set up the method needed  
17:01:13 21 good chromatography in the area where  
17:01:14 22 the key analytes were being measured  
17:01:17 23 and they succeeded in doing that.

17:01:19 24 They don't necessarily have  
17:01:21 25 good chromatography at the front end



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17:01:23 2 where the 5-androstanol comes out.  
17:01:26 3 That doesn't affect its retention time,  
17:01:29 4 but it does make it difficult to  
17:01:30 5 reliably measure its carbon 13, so in  
17:01:35 6 theory, what you'd like to do is not  
17:01:38 7 record its carbon 13 value at all. It  
17:01:40 8 just so happens that that's what the  
17:01:41 9 laboratory does, they do record it, but  
17:01:43 10 they, as far as I can tell do not use  
17:01:46 11 that information.

17:01:47 12 And more importantly, they  
17:01:50 13 don't need to use that information to  
17:01:53 14 come to a conclusion about the  
17:01:55 15 delta/delta values.

17:01:57 16 MR. RIVKIN: That part of  
17:01:58 17 what you wrote here I actually  
17:02:00 18 understand. What I don't understand is  
17:02:04 19 that here you're dealing with a range  
17:02:06 20 of plus or minus half per mil.

17:02:08 21 THE WITNESS: Right.

17:02:09 22 MR. RIVKIN: When we were  
17:02:10 23 looking at the laboratory source  
17:02:14 24 provider materials and it talked about  
17:02:17 25 a plus or minus of .3 per mil, you said

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17:02:22 2 that doesn't actually mean .3, because  
17:02:25 3 it's a standard error you have to at  
17:02:28 4 least double that to .6.

17:02:31 5 THE WITNESS: Right.

17:02:36 6 MR. RIVKIN: But here you  
17:02:37 7 didn't say the plus or minus .5 per mil  
17:02:42 8 would actually be just a standard error  
17:02:45 9 and you'd actually have to double that.  
17:02:47 10 So what's the difference between these  
17:02:50 11 two measurements?

17:02:52 12 THE WITNESS: Well, you  
17:02:52 13 know, if anything, it gives you some  
17:02:55 14 pride in LNDD because what they've done  
17:02:57 15 is they've set up pretty stringent  
17:03:00 16 criteria. They've got these standards,  
17:03:03 17 they were only established to plus or  
17:03:04 18 minus .3, and now they're saying  
17:03:07 19 they've got to get within .5.

17:03:09 20 What happens is that there's  
17:03:12 21 probably a little offset. But those  
17:03:15 22 values, whatever the true value is,  
17:03:16 23 whether it's 16.3 or 16.4, will remain  
17:03:20 24 the same from day in and day out.

17:03:22 25 And those four steroid

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17:03:26 2 values are locked, it's just that they  
17:03:30 3 can't be certified better than plus or  
17:03:32 4 minus .3, however, they will be the  
17:03:34 5 same value whatever they are every day,  
17:03:36 6 and LNDD says we're going to stay  
17:03:38 7 within a half of a mil of those things,  
17:03:41 8 which is pretty good.

17:03:44 9 MR. RIVKIN: Maybe I'm not  
17:03:46 10 asking my question right. When you  
17:03:49 11 were shown the difference between a  
17:03:53 12 16.3 and 16.69 you said that 16.69 was  
17:04:00 13 actually within the range even though  
17:04:03 14 it's obviously more than .3 away  
17:04:05 15 because you actually have to, at least  
17:04:07 16 you have to double the .3 because it's  
17:04:10 17 a standard error.

17:04:11 18 THE WITNESS: Correct.

17:04:12 19 MR. RIVKIN: If that is the  
17:04:13 20 proper analysis for those figures why  
17:04:17 21 is that also not a proper analysis for  
17:04:21 22 the .5 per mil range here?

17:04:26 23 THE WITNESS: I think that's  
17:04:27 24 a very good question. But what they do  
17:04:31 25 in setting up their SOP is to find a

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17:04:35 2 criterion that they're going to match.  
17:04:36 3 And what they've come up with is a more  
17:04:38 4 stringent criterion than they would  
17:04:41 5 necessarily need to put in place. Does  
17:04:44 6 that make sense? Why shouldn't they  
17:04:49 7 put a .6 down, for example?

17:04:50 8 MR. RIVKIN: No, why  
17:04:52 9 wouldn't it be double the .5? Why  
17:04:55 10 wouldn't part of your response in this  
17:04:57 11 paragraph, assuming what you told me  
17:04:58 12 about the 16.69 is correct, why  
17:05:00 13 wouldn't part of your response in this  
17:05:02 14 paragraph be in any event .5 doesn't  
17:05:05 15 really mean .5, there's a standard  
17:05:08 16 error and that actually means you can  
17:05:09 17 go up to one rather than .5?

17:05:13 18 THE WITNESS: It gets  
17:05:13 19 confusing, doesn't it?

17:05:15 20 MR. RIVKIN: I think I've  
17:05:16 21 shown that through my questions.

17:05:18 22 THE WITNESS: No, no. I  
17:05:19 23 mean I teach grown-ups this. Every  
17:05:21 24 year I teach people from industry, you  
17:05:23 25 know, how to set up methods and mass

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17:05:26 2 spectrometry at the American Society  
17:05:30 3 for Mass Spectrometry. We teach them  
17:05:32 4 quantitative mass spec and all this  
17:05:34 5 stuff and it's very confusing. Here  
17:05:36 6 the .5 is an absolute criterion. So  
17:05:40 7 what they've done in their SOP is  
17:05:42 8 they've said this is our operating  
17:05:44 9 standard and this is what we're going  
17:05:45 10 to meet every day. So that's different  
17:05:49 11 from the normal measurement error.  
17:05:51 12 That's the criteria. They say this is  
17:05:53 13 what we're going to meet. And that's  
17:05:56 14 their standard.

17:05:57 15 MR. RIVKIN: Thank you.

17:05:59 16 MR. BARNETT: May I ask a  
17:06:00 17 few follow-up points.

17:06:02 18 THE PRESIDENT: Just a  
17:06:03 19 moment, please.

17:06:04 20 MR. PAULSSON: Professor,  
17:06:05 21 you have no particular reason to be  
17:06:06 22 proud or not proud of this laboratory?

17:06:09 23 THE WITNESS: No.

17:06:11 24 MR. PAULSSON: But you said  
17:06:12 25 that your understanding of their

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17:06:15 2 methodology has been enhanced by your  
17:06:17 3 presence here during the hearings. And  
17:06:20 4 I was listening quite carefully to  
17:06:23 5 perceive what the difference was  
17:06:24 6 between the French and the way you do  
17:06:26 7 things and all I could really discern  
17:06:29 8 in your explanation was that it seems  
17:06:33 9 you're more regulated than they are but  
17:06:35 10 I suppose it's more to it than that.

17:06:37 11 THE WITNESS: With different  
17:06:38 12 language as well. I think everything  
17:06:39 13 that we do is there it's just that the  
17:06:41 14 language is -- there's subtleties how  
17:06:45 15 we set up methods versus other  
17:06:47 16 countries. I've worked in Germany and  
17:06:49 17 Italy, less in France and each country  
17:06:52 18 has kind of a slightly different style  
17:06:56 19 to how they set up their SOPs. I'm not  
17:06:58 20 sure SOP is exactly even the same in  
17:07:02 21 France, but they -- but when you start  
17:07:05 22 digging through it's very, very nicely  
17:07:08 23 done in terms of their method.

17:07:11 24 MR. PAULSSON: Surely  
17:07:13 25 language are trivial differences, you'd

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17:07:16 2 look at the substance of the method.

17:07:18 3 THE WITNESS: I look at the

17:07:19 4 substance of the method. Some things

17:07:21 5 have been hard to find that I know

17:07:24 6 exist probably in the early days of the

17:07:25 7 assays, but they don't bear today.

17:07:30 8 MR. PAULSSON: I still don't

17:07:32 9 take away an understanding of the

17:07:34 10 difference between the French, the way

17:07:36 11 the French do it and the way you do it.

17:07:38 12 THE WITNESS: There's a

17:07:39 13 certain level of early -- certain

17:07:41 14 documentation in the early stages of

17:07:43 15 the validation are harder to find at

17:07:45 16 this particular lab.

17:07:47 17 MR. PAULSSON: Okay.

17:07:50 18 THE PRESIDENT: Now, Mr.

17:07:52 19 Barnett.

17:07:53 20 REDIRECT EXAMINATION

17:07:55 21 BY MR. BARNETT:

17:07:55 22 Q. The 5-alpha AC is contained

17:07:57 23 both in the Mix Cal Acetate and in the

17:07:59 24 sample, correct?

17:08:00 25 A. It's added to the sample, so

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17:08:02 2 yes.

17:08:02 3 Q. And the criteria you speak  
17:08:04 4 of on Page 13 applies to the three out  
17:08:08 5 of four measurement in the Mix Cal  
17:08:11 6 Acetate, correct?

17:08:11 7 A. Correct.

17:08:12 8 Q. Have you seen any document  
17:08:14 9 anywhere in the doc packs that require  
17:08:17 10 the same criteria for the 5-alpha AC in  
17:08:21 11 the sample?

17:08:22 12 A. No, I haven't. And that's  
17:08:25 13 what I was looking for.

17:08:29 14 Q. My other question, just  
17:08:30 15 briefly, is that on that LNDD 0307 and  
17:08:35 16 I don't know that we need to bring it  
17:08:36 17 up. It's the negative 16.3 with the  
17:08:39 18 plus or minus .3. I want to make sure  
17:08:41 19 I understand that means when Eurofins  
17:08:43 20 sends it out they're telling you as the  
17:08:45 21 laboratory 16.3 but understand it may  
17:08:48 22 be negative 16.0 or it may be negative  
17:08:53 23 16.6?

17:08:54 24 A. Right, but once you have it  
17:08:56 25 whatever it is it's not going to change



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17:08:58 2 from day to day to day to day. It will  
17:09:01 3 always be there and that's key because  
17:09:02 4 you've got an anchor point to measure  
17:09:04 5 your results against.

17:09:05 6 Q. So we can think of it as  
17:09:07 7 that's an outgoing plus or minus margin  
17:09:09 8 into what you're receiving?

17:09:10 9 A. Right. Once you have it,  
17:09:12 10 every day you measure it you should get  
17:09:14 11 the same value.

17:09:15 12 Q. They're not trying to tell  
17:09:16 13 the laboratory that receives it what  
17:09:18 14 their method uncertainty should be?

17:09:19 15 A. No.

17:09:33 16 Q. With respect to the adverse  
17:09:37 17 analytical that brings us all here,  
17:09:41 18 forgetting criteria and all of these  
17:09:43 19 issues, just your scientific opinion as  
17:09:45 20 to reliability, if the 5-alpha AC had  
17:09:48 21 been off by one per mil does that in  
17:09:52 22 any way affect the delta/delta  
17:09:54 23 measurement that is -- in the sample  
17:09:57 24 that's at the core of this case?

17:09:58 25 A. I think I've already

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17:09:59 2 answered that question. That's not  
17:10:00 3 part of the chromatogram focus for the  
17:10:03 4 F3.

17:10:04 5 MR. BARNETT: Thank you.

17:10:11 6 MR. SUH: May I just ask two  
17:10:13 7 questions as follow-up from the panel's  
17:10:16 8 questions?

17:10:16 9 THE PRESIDENT: Yes,  
17:10:17 10 certainly.

17:10:17 11 RECROSS EXAMINATION

17:10:19 12 BY MR. SUH:

17:10:19 13 Q. Dr. Matthews, did you review  
17:10:20 14 the SOP for the .5 measure of  
17:10:23 15 uncertainty on the quality controls?

17:10:26 16 A. I do not believe I have.

17:10:28 17 Q. Do you know if there is one?

17:10:30 18 A. I am not positive that there  
17:10:32 19 is or is not one.

17:10:35 20 MR. SUH: Nothing further.

17:10:37 21 THE PRESIDENT: Thank you,  
17:10:39 22 doctor, that's all we need. You are  
17:10:41 23 free to go.

17:11:04 24 Mr. Young, do we now move to  
17:11:08 25 Dr. Jumeau?

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17:11:10 2 MR. YOUNG: Mr. Chair,  
17:11:11 3 what's our expected timing for the day?

17:11:13 4 THE PRESIDENT: We were  
17:11:14 5 hopeful that we might finish the next  
17:11:16 6 witness, but you might give us an  
17:11:19 7 indication. Is there any additional  
17:11:23 8 examination in chief? Or is it just a  
17:11:25 9 question of cross examination and  
17:11:28 10 reexamination?

17:11:30 11 MR. YOUNG: It would just be  
17:11:31 12 cross and redirect.

17:11:34 13 THE PRESIDENT: We would  
17:11:35 14 like to press on unless counsel have  
17:11:37 15 any other ideas to the contrary that  
17:11:40 16 they can persuasively articulate.

17:11:51 17 MR. SUH: Can I take a five  
17:11:52 18 minute break or so?

17:11:53 19 THE PRESIDENT: Certainly.

17:11:54 20 MR. RIVKIN: Do you have any  
17:11:55 21 sense of how long your cross will go?

17:12:02 22 MR. SUH: About 45 minutes.

17:12:04 23 THE PRESIDENT: We'll break  
17:12:05 24 for 10 minutes and then we'll come to  
17:12:09 25 Dr. Jumeau.

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17:12:11 2 (A recess was taken.)

17:30:32 3 THE PRESIDENT: Good

17:30:54 4 afternoon, Dr. Jumeau.

17:30:57 5 MS. JUMEAU: Good afternoon.

17:30:59 6 THE PRESIDENT: Would you

17:31:01 7 please declare and affirm that the

17:31:03 8 opinions you give to this panel will be

17:31:05 9 your honest opinions?

17:31:07 10 MS. JUMEAU: I do.

17:31:07 11 J A N I N E J U M E A U,

17:31:07 12 called as a witness on behalf of the

17:31:07 13 Respondent, having been first duly

17:31:07 14 affirmed by the President, was examined

17:31:09 15 and testified as follows:

17:31:09 16 THE PRESIDENT: Thank you

17:31:09 17 very much. Mr. Dunn.

17:31:11 18 MR. DUNN: Thank you, Mr.

17:31:12 19 Williams.

17:31:13 20 DIRECT EXAMINATION

17:31:15 21 BY MR. DUNN:

17:31:15 22 Q. Ms. Jumeau, have you provided

17:31:17 23 a witness statement and a rebuttal

17:31:19 24 witness statement in this case?

17:31:20 25 A. I have.

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17:31:20 2 Q. Do you adopt those as your  
17:31:22 3 testimony here?

17:31:23 4 A. I do.

17:31:32 5 THE PRESIDENT: Mr. Suh, Mr.  
17:31:34 6 Rivkin who's the assistant timekeeper  
17:31:36 7 just wants to give you some information,  
17:31:38 8 not in any way to deflect you from your  
17:31:41 9 examination, but just to give you the  
17:31:43 10 update.

17:31:44 11 MR. RIVKIN: As the president  
17:31:47 12 said, I'm merely the assistant, Carmen  
17:31:50 13 keeps the numbers. At this point,  
17:31:55 14 according to her calculations, and I've  
17:31:57 15 learned always to trust anything she  
17:31:59 16 tells me, you have used 13 hours and 35  
17:32:02 17 minutes. So that means if you do use  
17:32:05 18 roughly half an hour to 40 minutes as you  
17:32:08 19 said you would on this cross that would  
17:32:11 20 leave you the two hours that you've  
17:32:15 21 worked out as additional time for Monday  
17:32:18 22 for the various crosses and the closing.  
17:32:21 23 So we just want to make sure you were  
17:32:24 24 aware of that. Just for the record,  
17:32:41 25 USADA's used 9 hours and 33 minutes

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17:32:43 2 according to these calculations.

17:33:02 3 MR. SUH: When will we start  
17:33:05 4 closing, Monday afternoon?

17:33:07 5 THE PRESIDENT: As I think  
17:33:08 6 we made clear at least twice, we don't  
17:33:11 7 have the ability to go beyond 5 o'clock  
17:33:14 8 tonight because --

17:33:17 9 MR. PAULSSON: Monday.

17:33:18 10 MR. RIVKIN: Monday.

17:33:19 11 THE PRESIDENT: Monday,  
17:33:20 12 because one of our panel has a hearing  
17:33:22 13 other than in New York on Tuesday  
17:33:23 14 morning. So although we would like to  
17:33:26 15 extend that's why we sent the signal  
17:33:29 16 some weeks ago that we couldn't extend.

17:33:31 17 If we have a request to  
17:33:38 18 abbreviate the closings or else  
17:33:41 19 substitute for an oral closing a written  
17:33:43 20 closing, then we would be prepared to  
17:33:46 21 entertain that. We're not enthusiastic  
17:33:49 22 about doing it, but we'll listen to  
17:33:51 23 anything that either side suggests about  
17:33:53 24 what we do on Monday.

17:33:58 25 MR. SUH: If we started --

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17:34:00 2 THE PRESIDENT: We are  
17:34:01 3 starting already at 8 on Monday because  
17:34:03 4 we have Mr. Leguy coming in at eight  
17:34:06 5 but how long he'll take, I imagine it  
17:34:09 6 wouldn't be extensive, but that's just  
17:34:11 7 my view.

17:34:12 8 MR. RIVKIN: Then there are  
17:34:13 9 other witnesses who are listed for  
17:34:14 10 Monday and then there's closing and I  
17:34:17 11 think we'd probably want to go straight  
17:34:19 12 through and start the closing whenever  
17:34:21 13 we're done with the witnesses.

17:34:22 14 THE PRESIDENT: As we have  
17:34:25 15 Monday at the moment, Leguy, Garcia,  
17:34:28 16 Neveu, Ayotte and then the closing.

17:34:32 17 MR. RIVKIN: My guess is if  
17:34:33 18 you have two and a half hours left,  
17:34:36 19 USADA is not going to use its four and  
17:34:39 20 a half hours plus one, five and a half  
17:34:42 21 hours. So we'd be able to finish some  
17:34:47 22 time during the day Monday which would  
17:34:49 23 give us a little time to talk.

17:34:52 24 MR. BARNETT: Can I just ask,  
17:34:53 25 I heard four names. The third name I

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17:34:56 2 think has already been cancelled, but I  
 17:34:58 3 could have it wrong in my notes. I have  
 17:35:01 4 Leguy, Garcia and Ayotte as the three  
 17:35:05 5 remaining witnesses after we finish with  
 17:35:05 6 Ms. --

17:35:13 7 THE PRESIDENT: Neveu?

17:35:13 8 MR. SUH: We cancelled  
 17:35:19 9 Neveu.

17:35:23 10 Let me take a look at one  
 17:35:25 11 thing and then we'll be ready to start.

17:35:48 12 CROSS EXAMINATION

17:35:57 13 BY MR. SUH:

17:35:57 14 Q. Ms. Jumeau, first of all,  
 17:36:01 15 may I ask you are you being paid in  
 17:36:02 16 connection with your appearance here  
 17:36:04 17 today?

17:36:04 18 A. Yes.

17:36:05 19 Q. And at what rate are you  
 17:36:07 20 being paid?

17:36:07 21 A. I believe it's \$125 an hour.

17:36:12 22 Q. And how many hours have you  
 17:36:13 23 spent so far reviewing this case?

17:36:16 24 A. I haven't actually totaled  
 17:36:18 25 my hours, but it must amount to at



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17:36:21 2 least two solid weeks of work so far at  
17:36:27 3 approximately eight hours, so --

17:36:33 4 Q. Two weeks at eight hours?

17:36:34 5 A. Two weeks at eight hours per  
17:36:37 6 day, that's what, ten, between 80, 90  
17:36:43 7 hours.

17:36:52 8 Q. I'd like to turn your  
17:36:57 9 attention to your declaration at Page 3.  
17:37:18 10 Where it says, if you look at the middle  
17:37:23 11 of the page, and I'll have Todd highlight  
17:37:27 12 it, it says in your declaration, "The  
17:37:32 13 IsoPrime 1 uses the same software as we  
17:37:34 14 had developed at VG Isotech for the  
17:37:37 15 Isochrom system."

17:37:47 16 A. Yes.

17:37:47 17 Q. What leads you to believe that  
17:37:49 18 the IsoPrime 1 uses the same software as  
17:37:52 19 had been developed at VG Isotech for the  
17:37:55 20 Isochrom system?

17:37:56 21 A. Can you repeat your  
17:37:57 22 question.

17:37:57 23 Q. What leads you to believe  
17:37:58 24 that the IsoPrime 1 uses the same  
17:38:01 25 software as the Isochrom?

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17:38:08 2 A. When I visited the LNDD  
17:38:11 3 laboratory I recognized the software,  
17:38:13 4 the Windows, I recognized the tools,  
17:38:15 5 the facilities that are available on  
17:38:20 6 that software were identical to the  
17:38:21 7 software which I was familiar with when  
17:38:32 8 I was referring to Micromass.

17:38:35 9 Q. What version are you  
17:38:36 10 referring to when you say it uses the  
17:38:37 11 same software?

17:38:38 12 A. I think that LNDD are using  
17:38:40 13 version 1.67-2 I believe. I may need  
17:38:49 14 to check this. Yes, they are using  
17:38:52 15 1.67-2.

17:38:53 16 Q. And what version of the  
17:38:57 17 software of the Isochrom are you saying  
17:39:00 18 is the same software?

17:39:00 19 A. Oh, probably we were in the  
17:39:03 20 51 -- 1.50 something. I can't remember  
17:39:08 21 it's 12 years ago.

17:39:11 22 Q. Was it 1.55?

17:39:16 23 A. Possibly. I am not sure.

17:39:19 24 Q. It is clear that the  
17:39:21 25 IsoPrime and the Isochrom are different

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17:39:25 2 instruments, correct?

17:39:26 3 A. The IsoPrime and the  
17:39:27 4 Isochrom are two different mass  
17:39:32 5 spectrometers, yes, that's correct.

17:39:32 6 Q. And the Isochrom is a large  
17:39:34 7 instrument and the IsoPrime is a  
17:39:38 8 smaller instrument that fits on top of  
17:39:40 9 a counter?

17:39:41 10 A. Correct. The Isochrom is a  
17:39:43 11 mass spectrometer that is floor  
17:39:46 12 standing, it's a large machine. The  
17:39:48 13 IsoPrime is a bench job, mass  
17:39:51 14 spectrometer.

17:39:52 15 Q. Isn't it true that the  
17:39:53 16 flight to the vacuum housing, the  
17:39:55 17 collectors and the source are all  
17:39:57 18 different between the Isochrom and the  
17:40:00 19 IsoPrime?

17:40:02 20 A. No. The -- there are minor  
17:40:07 21 differences, but essentially the optics  
17:40:10 22 between the two systems are very  
17:40:14 23 similar.

17:40:26 24 Q. I'd like to turn your  
17:40:27 25 attention to footnote 1 on Page 18. On

1 JANINE JUMEAU - CROSS

17:40:32 2 footnote 1 of Page 18 it says "As  
17:40:34 3 mentioned earlier in my testimony,  
17:40:36 4 Isochrom is the predecessor name of the  
17:40:39 5 IsoPrime instrument."

17:40:40 6 A. Yes.

17:40:42 7 Q. By that sentence you're not  
17:40:45 8 suggesting that the Isochrom and the  
17:40:49 9 IsoPrime are similar, just differing in  
17:40:52 10 name, you would agree of course that  
17:40:54 11 they are in fact different instruments,  
17:40:55 12 correct?

17:40:55 13 A. They are not fundamentally  
17:40:59 14 different instruments. They use the  
17:41:01 15 identical principles. They are packaged  
17:41:05 16 in a different manner. But many of the  
17:41:12 17 components that we use in the Isochrom  
17:41:15 18 mass spectrometer we find in the IsoPrime  
17:41:19 19 mass spectrometer. For all intent and  
17:41:36 20 purposes they are the same -- the same  
17:41:38 21 instrument.

17:41:39 22 Q. Are they the same in the  
17:41:40 23 same way that the Finnigan instrument  
17:41:41 24 is the same?

17:41:42 25 A. No.

1 JANINE JUMEAU - CROSS

17:41:44 2 Q. I'd like to turn your  
17:42:00 3 attention to your declaration at Page  
17:42:03 4 17.

17:42:06 5 A. Yes.

17:42:08 6 Q. First you say that at the  
17:42:25 7 bottom of Page 17, you see where you  
17:42:27 8 say "First, the operating manual LNDD  
17:42:30 9 received from the manufacturer of the  
17:42:32 10 GC/C/IRMS instrument used for the stage  
17:42:34 11 17 analyses does not specify 0.3 per  
17:42:40 12 mil anywhere." Do you see that?

17:42:42 13 A. I can see this statement,  
17:42:43 14 yes.

17:42:43 15 Q. And this is with respect to  
17:42:45 16 your comments about linearity, right?

17:42:46 17 A. It is correct, yes.

17:42:48 18 Q. The Isochrom manual is the  
17:42:55 19 manual that LNDD had, right?

17:42:58 20 A. That's correct.

17:42:59 21 Q. They did not have the  
17:43:01 22 IsoPrime manual?

17:43:03 23 A. They could not have an  
17:43:05 24 IsoPrime manual because not -- it was  
17:43:07 25 not written by the company.

1 JANINE JUMEAU - CROSS

17:43:09 2 Q. Are you saying that there  
17:43:10 3 was no IsoPrime manual in 2006?

17:43:14 4 A. In 2006, no, I'm referring  
17:43:16 5 to the time that LNDD received the  
17:43:20 6 instrument -- oh, in 2006? I don't  
17:43:23 7 know whether there was an IsoPrime GC  
17:43:27 8 manual written in 2006, but the LNDD  
17:43:31 9 technicians did not have an IsoPrime GC  
17:43:35 10 manual.

17:43:36 11 Q. So you don't know whether or  
17:43:38 12 not there was an IsoPrime manual in  
17:43:39 13 2006?

17:43:41 14 A. In 2006 there should have  
17:43:45 15 been an IsoPrime EA manual because I  
17:43:50 16 returned to Micromass in 2003/2004 and  
17:43:57 17 actually wrote the IsoPrime EA manual  
17:44:00 18 for Micromass.

17:44:03 19 Q. And so do you know --

17:44:04 20 A. But that was -- excuse me,  
17:44:06 21 excuse me. But that manual is for a  
17:44:11 22 completely different instrument.

17:44:12 23 Q. Do you know why LNDD -- when  
17:44:15 24 you say completely different instrument,  
17:44:17 25 do you mean the IsoPrime? The IsoPrime

1 JANINE JUMEAU - CROSS

17:44:21 2 manual is for the IsoPrime instrument?

17:44:22 3 A. Okay, I think perhaps I better

17:44:25 4 clarify. An IsoPrime -- IsoPrime is

17:44:27 5 essentially the name of the mass

17:44:29 6 spectrometer. Those systems are a

17:44:33 7 combination of a mass spectrometer and a

17:44:37 8 sample preparation system with an

17:44:40 9 interface linking the two instruments.

17:44:45 10 The IsoPrime EA manual which I am talking

17:44:48 11 about which I wrote for Micromass in 2003

17:44:53 12 refers to the IsoPrime mass spectrometer

17:45:00 13 in combination with an elemental analyzer

17:45:03 14 which is a completely different sample

17:45:06 15 preparation system to the GC.

17:45:12 16 So although the IsoPrime EA

17:45:15 17 manual would be suitable for the

17:45:18 18 IsoPrime mass spectrometer, the whole

17:45:21 19 of the sections that deal with how to

17:45:27 20 run a sample, how to use the prep

17:45:30 21 system which is the most important part

17:45:32 22 of the instrument would be totally

17:45:38 23 irrelevant.

17:45:38 24 Q. The IsoPrime EA manual

17:45:40 25 contains a module for the IsoPrime IRMS

1 JANINE JUMEAU - CROSS

17:45:44 2 instrument?

17:45:44 3 A. Sorry.

17:45:46 4 Q. It contains a portion that  
17:45:48 5 governs, that is for the IsoPrime IRMS  
17:45:51 6 instrument, correct?

17:45:59 7 A. You could take a portion,  
17:46:00 8 you could actually take the portion  
17:46:02 9 that describes the mass spectrometer  
17:46:04 10 itself, yes, I agree.

17:46:06 11 Q. Why don't I show you the  
17:46:07 12 IsoPrime manual.

17:46:09 13 A. Sorry?

17:46:11 14 Q. I'd like to show you the  
17:46:12 15 IsoPrime manual which is GDC 522. If  
17:46:18 16 you could take a look at it.

17:46:19 17 A. Yes, I have seen this  
17:46:21 18 manual. This is not the manual that I  
17:46:22 19 wrote, by the way, this is a prior  
17:46:24 20 version of the IsoPrime EA.

17:46:31 21 Q. But this is the manual that  
17:46:32 22 would be used for the IsoPrime  
17:46:34 23 instrument that LNDD has?

17:46:35 24 A. No. Most of this manual  
17:46:39 25 would be totally irrelevant to the --



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17:46:45 2 to the IsoPrime -- to the IsoPrime GC  
17:46:48 3 which is the instrument that they have.

17:46:54 4 Q. It would be relevant to the  
17:46:56 5 JA series IsoPrime, correct?

17:46:58 6 A. No. It would be -- the part  
17:46:59 7 that describes the mass spectrometer  
17:47:02 8 would obviously be absolutely relevant  
17:47:04 9 because that's a description of the  
17:47:05 10 mass spectrometer that they have.

17:47:07 11 However, it is totally irrelevant as  
17:47:15 12 far as the description of the sample  
17:47:17 13 preparation system's concerned, how to  
17:47:19 14 operate, how to analyze samples. A lot  
17:47:24 15 of descriptions that deal with the  
17:47:27 16 software would be quite different. You  
17:47:34 17 would use different routines, do  
17:47:37 18 different routines -- different  
17:47:39 19 software routines. So the vast  
17:47:45 20 majority of the IsoPrime EA manual that  
17:47:48 21 we have in 522 would be pretty useless  
17:47:51 22 to a laboratory?

17:47:56 23 Q. For the JA series instrument  
17:48:00 24 or for the JB series instrument?

17:48:03 25 A. For the -- well, for both.

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17:48:04 2 Even worse for the JB because the JB  
17:48:07 3 series does not use this software, so.

17:48:10 4 Q. But it is relevant with  
17:48:11 5 respect to the IRMS portion of it?

17:48:14 6 A. For the mass spectrometer,  
17:48:17 7 yes, it is totally relevant.

17:48:19 8 Q. Is it totally relevant to  
17:48:21 9 the instrument as far as linearity  
17:48:22 10 goes?

17:48:23 11 A. Yes.

17:48:25 12 Q. I'd like you to turn to Page  
17:48:44 13 21.

17:48:45 14 A. Of the manual?

17:48:47 15 Q. Of the manual?

17:48:47 16 A. Which section?

17:48:48 17 Q. The first section?

17:48:49 18 A. Section 1.

17:48:50 19 Q. Why don't you turn to  
17:48:53 20 522.21.

17:48:54 21 A. Turn to?

17:48:58 22 Q. I'm sorry, Page 17. Excuse  
17:49:01 23 me, Page 17. It's our Exhibit number  
17:49:04 24 522.21.

17:49:13 25 A. Yes.

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17:49:13 2 Q. Do you see the technical  
17:49:14 3 specifications there?

17:49:15 4 A. I do.

17:49:15 5 Q. Do you recognize those as  
17:49:17 6 being the technical specifications for  
17:49:20 7 running linearity?

17:49:20 8 A. I do.

17:49:21 9 Q. Are these the specifications  
17:49:25 10 that would be used as you describe to  
17:49:27 11 run linearity tests for the IsoPrime 1  
17:49:31 12 which is the JA series?

17:49:33 13 A. No.

17:49:35 14 Q. I believe you just testified  
17:49:36 15 that this is the portion of the manual  
17:49:38 16 that would govern the IRMS part of a  
17:49:42 17 GC/C/IRMS JA series instrument? Am I  
17:49:52 18 incorrect?

17:49:52 19 A. Yes, this is not the  
17:49:54 20 description of the mass spectrometer,  
17:49:56 21 these are technical specifications. In  
17:49:58 22 that particular manual I was actually  
17:49:59 23 astounded to see this Page 17. I have  
17:50:02 24 seen it before, because if you turn to  
17:50:04 25 the description of the linearity test

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17:50:08 2 which I believe is on Page 32 of  
17:50:10 3 section 6, you will find that the  
17:50:15 4 specification that -- or the  
17:50:17 5 information that is given to the  
17:50:19 6 operator is in contradiction with this  
17:50:22 7 page which has been just slapped at the  
17:50:24 8 front of this manual.

17:50:27 9 Q. Is that in the EA section?

17:50:29 10 A. Yes. Section 6. If you  
17:50:32 11 turn to section 6.

17:50:35 12 Q. Yes.

17:50:35 13 A. Page 32 of this particular  
17:50:38 14 manual.

17:50:56 15 Q. Is that in the EA section of  
17:50:58 16 the manual?

17:50:58 17 A. It's in section 6 which I  
17:51:00 18 think is entitled -- let me just find  
17:51:04 19 this section, please, for you. It's  
17:51:25 20 entitled operation something. I'm  
17:51:26 21 sorry, there are very many pages to  
17:51:29 22 this manual and it's not very easy to  
17:51:31 23 find section 6.

17:51:39 24 MR. DUNN: Mr. Suh, can you  
17:51:40 25 give her a GDC page number?

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17:51:44 2 MR. SUH: She's the one  
17:51:45 3 finding the page.

17:51:46 4 THE PRESIDENT: There aren't  
17:51:47 5 any page numbers that have been put on  
17:51:49 6 by the parties here. So that's why  
17:51:52 7 there's a struggle to find it.

17:52:22 8 A. I'm looking for the  
17:52:24 9 linearity test, by the way, which is in  
17:52:25 10 this manual.

17:52:26 11 Q. I believe it's on Page 31.

17:52:28 12 A. On Page 31. Can you  
17:52:30 13 actually put it up.

17:52:39 14 Q. Sure, 31 of section 6.

17:52:41 15 A. So I wasn't very far off  
17:52:43 16 with my Page 32. I've looked at it so  
17:52:45 17 many times. Yes, it's on both Page 31  
17:53:06 18 and Page 32.

17:53:07 19 Q. Could you define what is the  
17:53:09 20 EA section of this manual?

17:53:12 21 A. What do you mean by this  
17:53:16 22 question, Mr. Suh?

17:53:17 23 Q. What part of the manual is  
17:53:18 24 the EA part? Because at the top of it  
17:53:20 25 it says IsoPrime EA user manual?

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17:53:23 2 A. Yes.

17:53:23 3 Q. I thought before, earlier  
17:53:27 4 you testified that the EA section of  
17:53:29 5 this manual would not be helpful with  
17:53:31 6 respect to a JA instrument?

17:53:33 7 A. Oh, no, the entire manual is  
17:53:36 8 entitled IsoPrime EA manual. This  
17:53:39 9 particular section is actually talking  
17:53:42 10 about the mass spectrometer. So this  
17:53:44 11 section is directly relevant to the  
17:53:48 12 mass spectrometer. This instrument has  
17:54:02 13 an IsoPrime mass spectrometer with a  
17:54:05 14 preparation system called an elemental  
17:54:06 15 analyzer. What LNDD have is an  
17:54:09 16 IsoPrime mass spectrometer with a GC  
17:54:16 17 sample preparation system.

17:54:18 18 Q. Okay. Could you turn to  
17:54:19 19 Page 15 of that same section.

17:54:21 20 A. Certainly. Yes.

17:54:37 21 Q. If this is applicable to the  
17:54:39 22 -- if this section is applicable to the  
17:54:41 23 JA series instrument, could you explain  
17:54:43 24 what appears on Page 15?

17:54:47 25 A. On Page -- on Page 15.

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17:54:56 2 Q. Yes, of that same section.

17:54:57 3 A. We have a description of the  
17:55:00 4 furnace tubes inside the elemental  
17:55:03 5 analyzer.

17:55:04 6 Q. And wouldn't you agree that  
17:55:05 7 this is the setup for the EA  
17:55:07 8 instrument?

17:55:08 9 A. The two are interwoven  
17:55:12 10 because if you go to the previous page  
17:55:15 11 it is telling the operator how to start  
17:55:18 12 the turbo molecular pump which is in  
17:55:22 13 the mass spectrometer part of the  
17:55:25 14 instrument, whilst on Page 15 you've  
17:55:30 15 gone back to the elemental analyzer.

17:55:36 16 So the thing is you have two  
17:55:38 17 parts -- you have two parts to the same  
17:55:40 18 instrument, you have a mass spectrometer  
17:55:42 19 and you've got an elemental analyzer.  
17:55:44 20 It's very difficult to divorce the two  
17:55:47 21 parts completely, and so in the manual  
17:55:48 22 you find -- you find maybe a section that  
17:55:51 23 deals with mass spectrometer. The next  
17:55:55 24 section may deal with the elemental  
17:55:57 25 analyzer, and then you go back to the

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17:56:00 2 mass spectrometer. The two are so  
17:56:02 3 closely linked you cannot completely  
17:56:04 4 separate the two.

17:56:05 5 So part -- part of -- parts  
17:56:13 6 of this manual would be -- all the  
17:56:15 7 parts that describe the mass  
17:56:17 8 spectrometer would be relevant to the  
17:56:19 9 mass spectrometer that LNDD have, but  
17:56:22 10 the majority of this manual deals in  
17:56:26 11 fact not with the mass spectrometer but  
17:56:28 12 deals with the elemental analyzer and  
17:56:32 13 this is completely irrelevant to the  
17:56:35 14 LNDD. What the LNDD required was a  
17:56:50 15 manual entitled IsoPrime GC manual  
17:57:01 16 which never existed.

17:57:02 17 Q. Let me ask you, Ms. Jumeau,  
17:57:03 18 if you could go back.

17:57:08 19 MR. SUH: Todd, if you could  
17:57:09 20 take us back to that first page we looked  
17:57:11 21 at in that same exhibit, which is --

17:57:14 22 A. Page 31?

17:57:16 23 Q. Page 17.

17:57:29 24 A. Page 17.

17:57:32 25 MR. DUNN: Of which section,



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17:57:33 2 I'm sorry?

17:57:34 3 MR. SUH: Of section 1.

17:57:36 4 A. Of section 1?

17:57:37 5 Q. Yes. It's the first page we  
17:57:39 6 looked at.

17:57:47 7 A. I have it, yes.

17:57:48 8 Q. So would you agree or  
17:57:50 9 disagree that this is the information  
17:57:52 10 and settings used to conduct linearity  
17:57:55 11 tests for the IsoPrime JA instrument?

17:57:57 12 A. I disagree. I disagree.  
17:58:00 13 This is a technical specification which  
17:58:03 14 is in conflict with the test which is  
17:58:06 15 described on Page 32 of section 6.

17:58:10 16 Q. Let me show you GDC 1397.

17:58:32 17 MR. DUNN: Can you wait  
17:58:33 18 until I get a copy.

17:58:35 19 Q. In fact you can begin by  
17:58:37 20 looking at GDC 1392.

17:58:41 21 MR. DUNN: Do we have a copy  
17:58:43 22 for the witness?

17:59:56 23 A. Mr. Suh, which --

17:59:58 24 Q. It starts on GDC 1392 and  
18:00:01 25 then goes to 1397. And if you could

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18:00:04 2 eventually turn your attention to 1397.

18:00:10 3 Do you recognize that this is the

18:00:11 4 IsoPrime --

18:00:14 5 MR. BARNETT: Let's give her

18:00:15 6 a chance to look at it.

18:00:17 7 Q. -- performance specification

18:00:18 8 sheet?

18:00:19 9 A. I recognize -- I recognize

18:00:21 10 the IsoPrime mass spectrometer on GDC

18:00:25 11 1393, yes.

18:00:27 12 Q. And 1397 is the performance

18:00:31 13 spec sheet?

18:00:32 14 A. And 1397, yes.

18:00:54 15 Q. Would you take a minute to

18:00:55 16 look at the data on GDC 1397.

18:00:57 17 A. Yes.

18:00:58 18 Q. Have you reviewed it?

18:01:00 19 A. No, this is the first time

18:01:02 20 I've seen actually this document.

18:01:04 21 Q. Why don't you take a moment

18:01:05 22 to review it.

18:01:07 23 A. This to me looks to be a

18:01:26 24 commercial document.

18:01:28 25 THE PRESIDENT: As opposed

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18:01:29 2 to what?

18:01:30 3 THE WITNESS: As opposed to  
18:01:31 4 a technical document. However, it does  
18:01:33 5 mention specifications for precision  
18:01:40 6 and linearity.

18:01:41 7 Q. Do the specifications on  
18:01:42 8 this sheet, which is GDC 1397 match  
18:01:45 9 those on Page 17 of the IsoPrime EA  
18:01:51 10 user manual?

18:01:52 11 MR. DUNN: Excuse me, I'm  
18:01:53 12 sorry for interrupting, but can we get  
18:01:55 13 a date or some authentication of what  
18:01:57 14 document we're looking at?

18:02:02 15 THE PRESIDENT: Is there a  
18:02:03 16 date on the page we're looking at?

18:02:16 17 A. Commercial documents were  
18:02:17 18 very, very rarely dated.

18:02:21 19 MR. SUH: We got the  
18:02:22 20 document off the web.

18:02:24 21 MR. DUNN: And when was  
18:02:26 22 that?

18:02:29 23 THE WITNESS: There may be  
18:02:31 24 further confusion.

18:02:36 25 MR. DUNN: So the date of

1 JANINE JUMEAU - CROSS

18:02:37 2 this document is what?

18:02:39 3 THE PRESIDENT: You mean the  
18:02:40 4 date it was extracted from the web, is  
18:02:42 5 that what you mean?

18:02:43 6 MR. SUH: About three months  
18:02:44 7 ago is when we got it off.

18:02:47 8 THE PRESIDENT: Now please  
18:02:49 9 make any further comments that you were  
18:02:51 10 going to make.

18:02:51 11 A. Yes, there may be further  
18:02:53 12 confusion because the IsoPrime mass  
18:02:56 13 spectrometer, in fact there were two  
18:02:59 14 different series. We had the -- they  
18:03:03 15 had the IsoPrime 1 or the JA series as  
18:03:07 16 they refer to, which was essentially  
18:03:13 17 very similar to the Isochrom mass  
18:03:16 18 spectrometer.

18:03:18 19 They then carried out further  
18:03:20 20 development, improved the performance and  
18:03:26 21 produced a JB series or referred to  
18:03:28 22 IsoPrime 2. I suspect that these  
18:03:30 23 specifications -- I am speculating, but I  
18:03:32 24 suspect that these specifications refer  
18:03:34 25 to the IsoPrime 2 mass spectrometer and

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18:03:38 2 not the IsoPrime 1. LNDD used an  
18:03:45 3 IsoPrime 1.

18:04:06 4 Q. So your testimony is the  
18:04:07 5 figures that are on GDC 1397 do not  
18:04:11 6 apply to the IsoPrime 1?

18:04:13 7 A. I am unsure. It would  
18:04:14 8 depend on the date that this document  
18:04:16 9 was produced. As I said, I suspect  
18:04:18 10 this is the specification for the  
18:04:21 11 IsoPrime 2 instrument.

18:04:24 12 If I look -- if I look at  
18:04:26 13 the -- for instance, if I look at the  
18:04:30 14 reference gas precision which is given  
18:04:34 15 for CO<sub>2</sub>, it is 0.08 per mil. That is a  
18:04:42 16 far better specification than for  
18:04:46 17 previous mass spectrometers. For  
18:04:49 18 previous mass spectrometers I believe  
18:04:52 19 that that was 0.2. So that tells me  
18:04:59 20 that you have here, or the commercial  
18:05:03 21 people are giving specifications for an  
18:05:06 22 instrument which is a little bit better  
18:05:10 23 than the Isochrom mass spectrometer and  
18:05:12 24 a little bit better than the IsoPrime 1  
18:05:15 25 mass spectrometer.

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18:05:17 2 Q. Does the reference gas  
18:05:19 3 precision, is that directly related to  
18:05:23 4 the linearity performance?

18:05:24 5 A. No.

18:05:25 6 Q. So when you look at the  
18:05:28 7 figures here, how would you know, since  
18:05:32 8 it's not related to linearity  
18:05:35 9 performance that it was only for the JB  
18:05:37 10 series and not the JA series?

18:05:39 11 A. I believe that one of the  
18:05:43 12 major improvements between the two  
18:05:45 13 series was related to the head  
18:05:49 14 amplifier, which was quieter than the  
18:05:56 15 IsoPrime 1 head amplifier.

18:05:59 16 In order to achieve the sort  
18:06:01 17 of precision measurement you would  
18:06:03 18 require very high stability -- higher  
18:06:07 19 stability. I am guessing because I  
18:06:11 20 don't know the date of issue of this --  
18:06:14 21 of this document.

18:06:25 22 Q. Let me ask you this  
18:06:27 23 question. Is there anything on 1397  
18:06:35 24 which says specifically that it is not  
18:06:38 25 for the JA series instrument?

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18:06:41 2 A. There is not, but there is  
18:06:42 3 nothing on this document that tells me  
18:06:45 4 that it is for the JA series either.

18:06:49 5 Q. So --

18:06:50 6 A. So we're both speculating on  
18:06:52 7 this matter.

18:06:53 8 Q. So your testimony is that  
18:06:54 9 the Isochrom manual sets the linearity  
18:07:01 10 measurements for the IsoPrime  
18:07:03 11 instrument but the manual that says  
18:07:06 12 IsoPrime user manual actually does not  
18:07:10 13 apply to the IsoPrime instrument?

18:07:13 14 A. No, no, no, I did not say  
18:07:15 15 that. The IsoPrime EA manual, the mass  
18:07:21 16 spectrometer part is the mass  
18:07:28 17 spectrometer which is at LNDD. In that  
18:07:31 18 manual the linearity test gives the  
18:07:35 19 operator an indication of a standard to  
18:07:41 20 pass the test and that specification,  
18:07:46 21 the instructions given to the operator  
18:07:48 22 at the time that he or she is testing  
18:07:50 23 the instrument, that specification is  
18:07:53 24 0.4 per mil, not the 0.3 per mil which  
18:07:58 25 is stated on Page 17. Within the same

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18:08:01 2 manual we have in fact we have two  
18:08:04 3 specifications. The specification  
18:08:07 4 which is given to the operator on this  
18:08:10 5 Page 32 of section 6, and that  
18:08:13 6 specification turned into per mil is  
18:08:16 7 0.4 per mil over the full range. At  
18:08:20 8 the front of the manual we have a  
18:08:23 9 technical specification sheet which  
18:08:26 10 says 0.3. So there is a conflict  
18:08:29 11 within the EA manual.

18:08:34 12 Q. So your testimony is -- well,  
18:08:38 13 in your declaration you have applied the  
18:08:41 14 .4 mil figure which is contained in the  
18:08:44 15 Isochrom manual?

18:08:45 16 A. Correct.

18:08:46 17 Q. Okay.

18:08:47 18 A. Which is also contained in  
18:08:49 19 the IsoPrime EA manual. It's the same,  
18:08:52 20 it's exactly the same test. It's being  
18:08:57 21 copied, totally copied, that section  
18:08:59 22 has been copied from one manual to the  
18:09:01 23 other.

18:09:06 24 Q. Can you tell me where it is  
18:09:07 25 copied in this manual right here?



1 JANINE JUMEAU - CROSS

18:09:08 2 A. What is copied?

18:09:09 3 Q. The Isochrom provisions that  
18:09:11 4 you're just referring to?

18:09:12 5 MR. DUNN: Excuse me, can we  
18:09:14 6 have clarification when you say "this  
18:09:16 7 manual right here." We've had two  
18:09:18 8 manuals up.

18:09:19 9 Q. I mean the manual that is  
18:09:20 10 the IsoPrime EA manual. And we don't  
18:09:24 11 have the Isochrom manual, by the way.

18:09:26 12 A. This is the manual that LNDD  
18:09:28 13 has, the Isochrom GC manual, not the  
18:09:37 14 IsoPrime EA.

18:09:38 15 MR. DUNN: My objection is  
18:09:41 16 your question is ambiguous because  
18:09:43 17 there are two IsoPrime EA manuals that  
18:09:47 18 you've just put into evidence and  
18:09:48 19 referred to and I just want you to  
18:09:50 20 identify which one of those two you're  
18:09:53 21 asking the witness about.

18:09:54 22 MR. SUH: There's only one  
18:09:56 23 manual. It has different parts to it.  
18:09:57 24 We only have one manual. We don't have  
18:10:00 25 the Isochrom manual.

1 JANINE JUMEAU - CROSS

18:10:01 2 A. Maybe you don't have any  
18:10:02 3 other manual, but the LNDD don't use  
18:10:05 4 the IsoPrime EA manual. The LNDD were  
18:10:08 5 given by the manufacturer a manual  
18:10:11 6 which is not in GDC 522.

18:10:15 7 Q. And you reviewed that  
18:10:16 8 manual?

18:10:16 9 A. I wrote that manual.

18:10:17 10 Q. Have you reviewed the one  
18:10:19 11 that LNDD has?

18:10:19 12 A. Yes.

18:10:20 13 Q. Would it surprise you to  
18:10:21 14 know that we have never received the  
18:10:23 15 Isochrom manual?

18:10:24 16 A. Well, I can't say that I'm  
18:10:28 17 actually surprised. Did you ask for  
18:10:30 18 it? Did you know it existed?

18:11:01 19 Q. I'll show you that in a  
18:11:02 20 minute, but just so that I'm clear the  
18:11:08 21 .4 figure comes from the Isochrom  
18:11:10 22 manual which you've seen at LNDD?

18:11:12 23 A. Yes.

18:11:12 24 Q. And you're saying that the  
18:11:13 25 .3 figure in the IsoPrime manual we

1 JANINE JUMEAU - CROSS

18:11:15 2 have in front of us does not apply,  
18:11:18 3 correct?

18:11:19 4 A. What I am saying is the 0.4  
18:11:21 5 is in the Isochrom GC manual which LNDD  
18:11:25 6 have. The 0.4 per mil is also in the  
18:11:28 7 IsoPrime EA manual in the section that  
18:11:32 8 describes how to conduct a linearity  
18:11:35 9 test. And in addition, in that manual  
18:11:37 10 you have a -- you have the confusion of  
18:11:40 11 this Page 17.

18:11:41 12 Q. So can you show me where in  
18:11:43 13 the manual that you have in front of  
18:11:45 14 you which is GDC 522, can you show me  
18:11:48 15 where there is the .4 per mil value?

18:11:51 16 A. Yes, certainly. It's on  
18:11:52 17 Page 32 of section 6.

18:12:05 18 Q. And aside from that, this is  
18:12:06 19 the section we were talking about  
18:12:08 20 before which is the section which is  
18:12:13 21 identical from the Isochrom manual?

18:12:14 22 A. Yes.

18:12:15 23 Q. That you are saying applies  
18:12:18 24 to the IsoPrime instrument, right?

18:12:21 25 A. I have to assume that when a

1 JANINE JUMEAU - CROSS

18:12:24 2 customer receives an instrument and is  
18:12:28 3 issued with a manual this is the  
18:12:33 4 specification for that instrument. It  
18:12:39 5 does not make much sense to give the  
18:12:41 6 customer a manual with different  
18:12:43 7 specifications.

18:12:44 8 Q. Would it change your opinion  
18:12:47 9 about whether or not the .3 or .4  
18:12:50 10 figure was the correct one if you were  
18:12:52 11 aware that the director of LNDD, Dr. de  
18:13:00 12 Ceaurriz, has published an article  
18:13:02 13 which indicates the use of a .3  
18:13:04 14 linearity measure? Would that make a  
18:13:06 15 difference to you?

18:13:06 16 A. No.

18:13:08 17 Q. And why not?

18:13:09 18 A. From -- if you look at the  
18:13:14 19 position of the laboratory technicians,  
18:13:17 20 they have been issued with a manual for  
18:13:21 21 their instrument and in that manual it  
18:13:23 22 states clearly that the specification  
18:13:25 23 is 0.4. You cannot expect --

18:13:36 24 Q. Let me turn your attention  
18:13:37 25 to Page 17 of your declaration.

1 JANINE JUMEAU - CROSS

18:13:45 2 A. Okay.

18:13:54 3 Q. In the first sentence it  
18:13:55 4 says "Even if one were to accept Mr.  
18:13:58 5 Landis' linearity argument, it does not  
18:14:01 6 undermine the validity of LNDD's  
18:14:03 7 measure of delta values because the Mix  
18:14:06 8 Cal Acetate results establish that the  
18:14:07 9 instrument was measuring accurately."  
18:14:09 10 Do you see that?

18:14:10 11 A. Yes, I do.

18:14:10 12 Q. And the second part, "and  
18:14:13 13 because linearity is not a factor when  
18:14:15 14 comparing peaks of relatively  
18:14:16 15 comparable size, such as the 5-alpha  
18:14:19 16 diol and Pdiol in Mr. Landis' urine."

18:14:22 17 A. Yes.

18:14:23 18 Q. Also in your declaration you  
18:14:34 19 recognize that on Page 13, the bottom  
18:14:37 20 of 13 and the top of 14, that one can  
18:14:45 21 readily see that the backgrounds in the  
18:14:47 22 chromatograms contain contaminants of  
18:14:49 23 very low intensities, right?

18:14:52 24 A. Yes.

18:14:52 25 Q. You agree with that?

1 JANINE JUMEAU - CROSS

18:14:53 2 A. Yes.

18:14:58 3 Q. Now, wouldn't you agree that  
18:14:59 4 linearity over the range of these peaks  
18:15:02 5 contaminants of low intensities is  
18:15:04 6 important to establish because if those  
18:15:05 7 -- if you don't know the isotopic  
18:15:07 8 values of those smaller peaks and they  
18:15:10 9 are -- then you don't know whether or  
18:15:12 10 not -- you don't know how far they are  
18:15:14 11 carbon 13 depleted which may affect  
18:15:16 12 your results?

18:15:17 13 A. These are contaminants, very  
18:15:24 14 small contaminants in the background.  
18:15:30 15 Their isotopic ratios or their isotopic  
18:15:33 16 values are not measured. However, we  
18:15:36 17 can make an assessment as to the  
18:15:39 18 isotopic value in a different way.  
18:15:42 19 There is no measurement made on small  
18:15:44 20 peaks like this. It does not make any  
18:15:46 21 sense. And therefore, the linearity  
18:15:51 22 issue is only applicable to sample  
18:15:53 23 peaks. Samples that are measured  
18:15:56 24 within the recommended measuring range  
18:15:59 25 for the mass spectrometer.

1 JANINE JUMEAU - CROSS

18:16:03 2 Q. Wouldn't you agree that these  
18:16:06 3 smaller peaks, if they are accidentally  
18:16:09 4 integrated at the baseline, for example,  
18:16:13 5 by automatic processing or manual  
18:16:15 6 processing, if you don't know what their  
18:16:17 7 isotopic value is it could -- it could  
18:16:23 8 determine --

18:16:23 9 A. If you don't --

18:16:24 10 Q. I'm sorry, let me finish the  
18:16:25 11 question -- it could affect or change  
18:16:27 12 the outcome of your isotopic result?

18:16:30 13 A. If you don't know the values  
18:16:41 14 it could potentially -- well, it depends,  
18:16:45 15 it depends on the values. Let's just  
18:16:48 16 have a look at the situation that we have  
18:16:50 17 here. We do have a few low contaminants.  
18:16:55 18 The isotopic values are not evaluated on  
18:16:59 19 those contaminants. However, we can say  
18:17:04 20 that those contaminants are within the  
18:17:07 21 natural range of enrichment.

18:17:11 22 Q. How do you know -- if you  
18:17:13 23 don't test the linearity of your  
18:17:16 24 instrument down to that range of the  
18:17:19 25 small contaminants, how can you say

1 JANINE JUMEAU - CROSS

18:17:21 2 that you know that they are within the  
18:17:24 3 natural range of -- of carbon 13  
18:17:30 4 values? It could be -- wouldn't you  
18:17:31 5 agree those little peaks could have  
18:17:33 6 widely varying carbon 13 depleted  
18:17:37 7 values?

18:17:37 8 A. No, I don't agree.

18:17:39 9 Q. But how would you know that  
18:17:41 10 if you don't test for linearity over  
18:17:43 11 the entirety of the range?

18:17:44 12 A. I know that from the ratio  
18:17:46 13 trace, from the two over one ratio  
18:17:49 14 trace.

18:17:50 15 Q. And are you saying that the  
18:17:53 16 two over one ratio trace would -- allows  
18:18:02 17 you to not test for linearity over the  
18:18:05 18 range of the smaller peaks of  
18:18:06 19 contaminants because it will provide you  
18:18:08 20 with some information?

18:18:13 21 A. There is no reason, there is  
18:18:15 22 no justification to measure the  
18:18:19 23 linearity outside the range of the  
18:18:26 24 range for the sample peaks. There's no  
18:18:31 25 logic.



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18:18:34 2 Q. Well, the logic would be --  
18:18:56 3 I mean isn't it -- isn't it essential  
18:19:00 4 that you be able to determine the  
18:19:04 5 isotopic values of smaller peaks so  
18:19:08 6 that you can be sure that they are not  
18:19:11 7 contributing to your background in a  
18:19:13 8 way that is altering or affecting your  
18:19:15 9 isotopic determination of the peaks in  
18:19:18 10 question?

18:19:19 11 A. No.

18:19:22 12 Q. Let me turn to Page 215 of  
18:19:35 13 the IsoPrime manual that you have  
18:19:37 14 before you. Oh, Page 31.

18:19:42 15 A. Of the IsoPrime --

18:19:46 16 Q. Of section 6, the portion of  
18:19:51 17 the manual that you were saying applies  
18:19:53 18 to -- the portion of the Isochrom  
18:19:56 19 manual that you say applies to the  
18:19:57 20 IsoPrime instrument?

18:19:59 21 A. Section 6, which page,  
18:20:01 22 please?

18:20:02 23 Q. Section 6, Page 31.

18:20:34 24 A. Yes.

18:20:34 25 Q. And did you write this

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18:20:36 2 portion of the --

18:20:37 3 A. I did.

18:20:37 4 Q. And do you see at the top it

18:20:40 5 says "It is essential that whatever

18:20:42 6 the" --

18:20:44 7 A. Well, wait a minute, which

18:20:45 8 page are you talking?

18:20:46 9 Q. Page 31.

18:20:47 10 A. Yes.

18:20:47 11 Q. Do you see at the top there

18:20:49 12 it says "It is essential that, whatever

18:20:51 13 the ion current size within the normal

18:20:53 14 measuring range of the instrument, the

18:20:55 15 ion optics behave with linear

18:20:57 16 characteristics"?

18:20:58 17 A. Yes.

18:20:58 18 Q. And applying that principle

18:21:01 19 here you don't agree that you should be

18:21:03 20 able to measure -- you should test for

18:21:06 21 linearity over the course of the

18:21:08 22 smaller peaks?

18:21:10 23 A. No, if I believe that I

18:21:11 24 should have tested the linearity over a

18:21:13 25 much wider range I would have written

1 JANINE JUMEAU - CROSS

18:21:16 2 so.

18:21:17 3 Q. If you go down to the next  
18:21:19 4 sentence, it says "The measuring dynamic  
18:21:22 5 range, defined in the specifications for  
18:21:25 6 this instrument is for ion current  
18:21:27 7 between 1E-9 A and 1E-8 A. Do you see  
18:21:35 8 that?

18:21:35 9 A. Yes, I see that.

18:21:36 10 Q. And what are the range of  
18:21:39 11 the peak size we're looking at?

18:21:40 12 A. In which instance, please?

18:21:42 13 Q. In the samples in question  
18:21:45 14 here, samples --

18:21:47 15 A. I looked at the range, I  
18:21:48 16 think that the narrow -- the smallest  
18:21:51 17 peak stood at 1.98 nanoamp and that was  
18:21:58 18 in the blank urine. I'm going by  
18:22:01 19 memory there, and I believe that the  
18:22:02 20 largest peak, the tallest peak was also  
18:22:05 21 in the blank urine and it stood at 7.10  
18:22:17 22 nanoamp.

18:22:17 23 Q. Ms. Jumeau, wouldn't you  
18:22:18 24 agree that this portion of the manual  
18:22:20 25 requires you to measure linearity over

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18:22:22 2 the dynamic range and not just over the  
18:22:25 3 target -- over the range of the peaks  
18:22:27 4 that you are targeting?

18:22:28 5 A. No, I don't agree. The  
18:22:34 6 instruments are sold with a measuring  
18:22:36 7 range of a total of 1 to 10 nanoamp.  
18:22:42 8 That is the sales specification that  
18:22:45 9 the customer will be able to measure  
18:22:48 10 peaks that are as small as one nanoamp  
18:22:52 11 and as large as 10 nanoamp. As a  
18:22:56 12 result, we had to define the linearity  
18:22:59 13 over the capability, the measuring  
18:23:03 14 range of the instrument which was from  
18:23:08 15 1 to 10 nanoamp. There are no  
18:23:11 16 technical justifications why you should  
18:23:14 17 measure the linearity or check that  
18:23:17 18 your instrument is linearity over the  
18:23:19 19 entire range if you do not use the  
18:23:21 20 entire range.

18:23:23 21 Q. So your testimony is, just  
18:23:26 22 so I can make sure I'm perfectly clear,  
18:23:29 23 is that you only need to measure  
18:23:32 24 linearity over the peak range of your  
18:23:34 25 target peaks, correct?

1 JANINE JUMEAU - CROSS

18:23:35 2 A. Just say this again, please,

18:23:37 3 Mr. Suh.

18:23:50 4 MR. SUH: Can you read it

18:23:51 5 back.

18:23:52 6 (Record read as requested.)

18:23:52 7 A. Correct.

18:23:52 8 Q. And that for this

18:23:53 9 particularize prime instrument, the JA

18:23:56 10 instrument that LNDD had, that the

18:24:07 11 appropriate linearity standards that

18:24:10 12 should be applied are the ones that are

18:24:13 13 contained in the Isochrom manual,

18:24:15 14 correct?

18:24:16 15 A. And in the IsoPrime.

18:24:18 16 Q. But the part that's in the

18:24:20 17 IsoPrime manual is taken from the

18:24:22 18 Isochrom manual, correct?

18:24:24 19 A. The --

18:24:25 20 Q. It is --

18:24:26 21 A. It's a copy.

18:24:27 22 Q. It's a copy?

18:24:28 23 A. Correct.

18:24:28 24 Q. And that the information on

18:24:30 25 the website that sets forth the linearity

1 JANINE JUMEAU - CROSS

18:24:33 2 standards for the IsoPrime instrument

18:24:35 3 does not apply to this IsoPrime 1

18:24:38 4 instrument, correct?

18:24:38 5 A. I guess it does not.

18:24:44 6 MR. SUH: No further

18:24:45 7 questions.

18:24:47 8 THE PRESIDENT: Mr. Dunn?

18:24:50 9 MR. DUNN: No questions.

18:24:54 10 THE PRESIDENT: Thank you

18:24:57 11 very much. The panel has no questions.

18:27:41 12 The assistant timekeeper is

18:27:43 13 now coming back on.

18:27:44 14 MR. RIVKIN: With the time

18:27:45 15 you've just used you've gone over the

18:27:47 16 14 hours. What we would hope is that

18:27:49 17 you would use about the two hours that

18:27:51 18 we talked about as an extension on

18:27:53 19 Monday, that we would want the parties

18:27:58 20 to keep to an hour closing as we had

18:28:05 21 talked about, which would give you

18:28:08 22 ample time with the remaining three

18:28:11 23 witnesses we hope. But we also wanted

18:28:16 24 to suggest to the parties and maybe you

18:28:18 25 can talk about it, what we hope is in

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18:28:20 2 the closings we could really hear from  
18:28:22 3 you the highlights of what you want us  
18:28:28 4 to understand, give us a chance to ask  
18:28:30 5 questions. And the parties can perhaps  
18:28:34 6 talk about whether there would be some  
18:28:39 7 written posthearing submissions too to  
18:28:43 8 wrap things up. So to some extent what  
18:28:46 9 you don't need to do on Monday is  
18:28:48 10 provide detailed chapter and verse, or  
18:28:52 11 transcript references, but to hit us  
18:28:55 12 with the main points you want us to  
18:28:58 13 consider and give us a chance to ask  
18:28:59 14 some questions and then perhaps between  
18:29:01 15 the two of you between now and then you  
18:29:03 16 could work out what the form of some  
18:29:05 17 posthearing submission might be or we  
18:29:09 18 can work it out with you on Monday.

18:29:11 19 MR. SUH: So I take it by  
18:29:13 20 the panel's comments that you are  
18:29:17 21 forecasting that we would do a  
18:29:19 22 posthearing submission of some sort?

18:29:21 23 THE PRESIDENT: Yes, because  
18:29:22 24 we think it will be most beneficial if  
18:29:25 25 we have your oral closings where we can

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18:29:28 2 also ask questions, but in view of the  
18:29:30 3 importance of the matter you should  
18:29:32 4 have the opportunity to file a  
18:29:33 5 posthearing brief which gives  
18:29:35 6 transcript references to the evidence  
18:29:36 7 that you particularly rely upon. We  
18:29:40 8 think that would be helpful in a case  
18:29:42 9 of this complexity.

18:29:45 10 MR. RIVKIN: If you want to  
18:29:49 11 set a page limit or some other parameters  
18:29:51 12 on what would be done, that's fine. We  
18:29:55 13 understand that posthearing submissions  
18:29:57 14 can be time consuming and costly. We  
18:30:01 15 just want to try to give you between the  
18:30:03 16 time that will remain on Monday some  
18:30:06 17 opportunity to supplement it with  
18:30:09 18 additional detail if you're not able to  
18:30:12 19 provide us with that detail.

18:30:14 20 MR. BARNETT: Just so we can  
18:30:15 21 have that discussion in a productive  
18:30:18 22 manner, does the panel have a time  
18:30:20 23 frame in mind to help with the page  
18:30:22 24 limit?

18:30:23 25 THE PRESIDENT: It will be



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18:30:24 2 simultaneous exchange, but we would,  
18:30:26 3 all we would say would be that we'd  
18:30:29 4 like it as soon as reasonably possible,  
18:30:31 5 but we would be very happy for you both  
18:30:33 6 to indicate what you think would be  
18:30:36 7 workable from your standpoint bearing  
18:30:38 8 in mind your other commitments and so  
18:30:41 9 on.

18:30:43 10 MR. PAULSSON: If I might  
18:30:44 11 comment, the attraction of this system  
18:30:47 12 might be that the advocate doesn't have  
18:30:51 13 to be schizophrenic. The purpose of the  
18:30:54 14 oral submissions is impressionistic, the  
18:30:57 15 strong themes without having to feel  
18:31:00 16 compulsive about noting down citations  
18:31:02 17 and references and specific matters as  
18:31:05 18 though this is the absolute last word,  
18:31:07 19 knowing that there will be an opportunity  
18:31:09 20 to do that detailed referencing. But  
18:31:12 21 again, you may confer among yourselves  
18:31:16 22 and see what you wish.

18:31:17 23 MR. RIVKIN: We're trying to  
18:31:18 24 do this to be helpful to you.

18:31:20 25 MR. SUH: I understand and I

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18:31:21 2 appreciate that. It seems to me that  
18:31:22 3 if we -- we're happy to do it. I would  
18:31:26 4 suggest a page limit because page  
18:31:28 5 limits are extremely helpful for us.  
18:31:31 6 MR. RIVKIN: We think between  
18:31:33 7 now and Monday hopefully the two of you  
18:31:35 8 can decide what would be appropriate.  
18:31:37 9 You know better what you might need and  
18:31:40 10 what format you might want and what time  
18:31:45 11 period is feasible.

18:31:47 12 MR. BARNETT: We can meet  
18:31:48 13 for Easter brunch to discuss it.

18:31:54 14 MR. SUH: And then as to the  
18:31:55 15 remainder of Monday then, if we were to  
18:31:57 16 start --

18:32:00 17 THE PRESIDENT: We have to  
18:32:00 18 start at eight because we have Mr.  
18:32:02 19 Leguy --

18:32:04 20 MR. SUH: I'm actually  
18:32:05 21 thinking given the time availability we  
18:32:07 22 would also not cross examine Mr. Leguy.

18:32:13 23 MR. PAULSSON: You're  
18:32:14 24 thinking or you're saying?

18:32:18 25 MR. SUH: I'm saying.

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18:32:19 2 MR. DUNN: And Ms. Garcia?

18:32:23 3 MR. SUH: Ms. Garcia we

18:32:25 4 would still cross examine for just a

18:32:27 5 few minutes by telephone.

18:32:35 6 MR. RIVKIN: You're

18:32:36 7 essentially saying you'll use about an

18:32:38 8 hour on Ms. Ayotte and about an hour

18:32:40 9 for closing?

18:32:42 10 MR. SUH: I believe that

18:32:43 11 would be right. I would ask the panel

18:32:45 12 if we are down to that and we need a

18:32:47 13 little extra time for either closing or

18:32:49 14 Ms. Ayotte, that we could get that

18:32:52 15 because that well puts us within

18:32:56 16 finishing before five o'clock. I'm

18:32:59 17 very mindful of the panel's timing, but

18:33:01 18 it seems like we would well be able to

18:33:03 19 finish by mid-afternoon at this rate.

18:33:06 20 THE PRESIDENT: We would be

18:33:07 21 very happy to do exactly what you say

18:33:09 22 if we make it through the witnesses,

18:33:12 23 and we can have a break to get your

18:33:13 24 thoughts together before we do your

18:33:15 25 closings.

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18:33:16 2 MR. SUH: Perhaps we would  
18:33:17 3 start after lunch closings and then  
18:33:19 4 that would give us four hours really  
18:33:22 5 till 5 o'clock if we went from 12 to  
18:33:25 6 one for lunch.

18:33:27 7 MR. RIVKIN: I'm going to  
18:33:28 8 need take lunch on Monday roughly  
18:33:31 9 between one and two, so however that --  
18:33:35 10 it may mean we want to do one closing  
18:33:38 11 before and one after, whatever, I don't  
18:33:40 12 know.

18:33:40 13 MR. BARNETT: Logistics, are  
18:33:42 14 we still going to start at 8 now that  
18:33:44 15 Mr. Leguy is released.

18:33:47 16 THE PRESIDENT: The answer  
18:33:48 17 is no. But I think on the afternoon  
18:33:51 18 closing, I don't think we want to  
18:33:52 19 extend the time because then it starts  
18:33:54 20 to lose its point which is that it  
18:33:56 21 should be the key highlights you want  
18:33:59 22 to point out. But I'm talking about  
18:34:03 23 our inability to give you a gap between  
18:34:05 24 the finish of the witnesses and the  
18:34:07 25 start of that one hour each.

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18:34:11 2 MR. SUH: Frankly I'm more  
18:34:12 3 concerned to have a little extra time  
18:34:14 4 to question Ms. Ayotte. We're in a  
18:34:16 5 situation where we've already given up  
18:34:18 6 a lot of witnesses and frankly we need  
18:34:20 7 to cross examine Ms. Ayotte.

18:34:23 8 THE PRESIDENT: The way  
18:34:24 9 things are unfolding there won't be a  
18:34:26 10 problem doing that.

18:34:27 11 MR. SUH: All right.

18:34:28 12 THE PRESIDENT: All that  
18:34:29 13 needs to be indicated is Ms. Garcia  
18:34:34 14 would then be on at 9 o'clock because  
18:34:38 15 we've got no need to come here at 8  
18:34:40 16 o'clock.

18:34:41 17 MR. SUH: That would be  
18:34:43 18 fine.

18:34:43 19 THE PRESIDENT: You'd like  
18:34:44 20 to have a gap between that and Dr.  
18:34:46 21 Ayotte?

18:34:47 22 MR. SUH: I don't believe we  
18:34:48 23 need that.

18:34:51 24 MR. RIVKIN: Then I think  
18:34:52 25 given the timing you should probably be

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18:34:55 2 ready to go into the closing after a  
18:34:59 3 regular kind of break.

18:35:06 4 MR. SUH: And what order  
18:35:07 5 does the panel view the closings going?

18:35:13 6 THE PRESIDENT: We're  
18:35:14 7 obliged by the CAS rules to do what  
18:35:17 8 we've got here, that you go first and  
18:35:19 9 the respondent goes last because the  
18:35:22 10 rules say the respondent has to have  
18:35:24 11 the last word.

18:35:30 12 MR. PAULSSON: So the last  
18:35:31 13 oral word.

18:35:32 14 THE PRESIDENT: The last  
18:35:33 15 oral word.

18:35:34 16 MR. SUH: Okay. Thank you.

18:35:35 17 THE PRESIDENT: Can I just do  
18:35:37 18 one other thing by way of a formality and  
18:35:39 19 that is simply to put into the record  
18:35:41 20 that all the rulings we gave on Friday  
18:35:45 21 afternoon, the transcript references are  
18:35:48 22 Page 89 to 98, which we gave as  
18:35:53 23 provisional rulings are now final rulings  
18:35:57 24 because neither party has applied to make  
18:35:59 25 any further submissions.

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18:36:02 2 And equally, it now follows  
18:36:04 3 that the parties have no other  
18:36:07 4 outstanding procedural matters that they  
18:36:08 5 want us to deal with. I just want to put  
18:36:11 6 that in the record since the time has  
18:36:13 7 expired for any further applications.

18:36:15 8 One other matter which I  
18:36:25 9 should mention now. There have been a  
18:36:27 10 fair number of references to the  
18:36:30 11 transcript below which is perfectly in  
18:36:33 12 order, but it would be very helpful to  
18:36:36 13 us if it's able to produce a Minuscript  
18:36:39 14 version of the full transcript with an  
18:36:43 15 index listing the page references to  
18:36:45 16 the witness's testimony because the way  
18:36:47 17 it is at the moment it's impossible to  
18:36:52 18 tell what we've got, who's speaking and  
18:36:55 19 who's on. Is that --

18:37:00 20 MR. YOUNG: This is what it  
18:37:01 21 looks like and we'll figure out a way  
18:37:02 22 if somebody has a clean copy to get it  
18:37:05 23 to you.

18:37:07 24 MR. SUH: Are you talking  
18:37:08 25 about a hard copy or an electronic

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18:37:10 2 copy?

18:37:11 3 MR. YOUNG: I think that's  
18:37:11 4 the wrong thing, but it's the same  
18:37:14 5 size.

18:37:14 6 MR. RIVKIN: The disc is in  
18:37:16 7 a Notepad version so it's very hard to  
18:37:18 8 use. You can't find -- either there's  
18:37:23 9 no word index and it's hard to find  
18:37:25 10 which witness is testifying on which  
18:37:26 11 pages.

18:37:29 12 MR. SUH: I think we have it  
18:37:31 13 on searchable PTX.

18:37:35 14 MR. BARNETT: I'm not sure  
18:37:36 15 we do.

18:37:38 16 MR. YOUNG: Or in the hard  
18:37:39 17 copy.

18:37:41 18 THE PRESIDENT: That would  
18:37:41 19 be in the CAS record, or is that your  
18:37:44 20 personal copy printed out?

18:37:48 21 MR. YOUNG: No, I think this  
18:37:49 22 will be in the CAS record.

18:37:51 23 MR. RIVKIN: What we have in  
18:37:52 24 the CAS record is here and it's a  
18:37:55 25 Notepad version which is why it's hard



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18:37:56 2 to use.

18:37:59 3 MR. YOUNG: Why don't you

18:37:59 4 tell us what you want. This is what

18:38:01 5 the Minuscript looks like and it's got

18:38:04 6 a table of contents with Shackelton

18:38:08 7 examination by Young, examination by

18:38:10 8 Jacobs, examination by Suh, examination

18:38:12 9 by Young, examination by Jacobs, all

18:38:14 10 that kind of index and then there may

18:38:18 11 be something electronic too. This is

18:38:20 12 the one that I use.

18:38:23 13 THE PRESIDENT: Well, if we

18:38:24 14 could have that, one of those each that

18:38:27 15 would be terrific.

18:38:30 16 MR. YOUNG: I assume that

18:38:32 17 somewhere we have --

18:38:33 18 MR. BARNETT: I don't know

18:38:35 19 that we need to do this on the record

18:38:37 20 but we can show you a couple of ways we

18:38:39 21 have it and you can choose one.

18:38:40 22 MR. RIVKIN: That's fine.

18:38:41 23 We don't need it Monday, we just need

18:38:43 24 it sometime soon after the hearing.

18:38:57 25 THE PRESIDENT: We will now

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18:38:58 2 adjourn until 9 o'clock Monday when  
18:39:01 3 we'll have Ms. Garcia by telephone. Is  
18:39:06 4 that right?

18:39:06 5 MR. BARNETT: Yes.

18:39:07 6 THE PRESIDENT: Followed by  
18:39:09 7 Dr. Ayotte and then followed by one  
18:39:12 8 hour closing speeches. Thank you very  
18:39:17 9 much for your help.

18:39:23 10 (Time noted: 6:39 p.m.)

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[illegible]

I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify that the foregoing proceedings were taken before me on March 22, 2008;

That the within transcript is  
a true record of said proceedings;

That I am not connected by blood or marriage with any of the parties herein nor interested directly or indirectly in the matter in controversy, nor am I in the employ of the counsel.

IN WITNESS WHEREOF, I have  
hereunto set my hand this \_\_\_\_ day of  
\_\_\_\_\_, 2008.

GAIL F. SCHORR, C.S.R., C.R.R.

| DESCRIPTION  | PAGE  | LINE |       |      |      |
|--|-------|------|-------|------|------|
| (Matthews Exhibit 1 for identification, New York Times article.) | 1101  | 25   |       |      |      |
| (Respondent's Exhibit 156 for identification, photograph.)       | 1074  | 25   |       |      |      |
| WITNESS  | PANEL | DIR  | CROSS | RED  | REC  |
| C. FRELAT  |       |      |       | 896  | 920  |
| S. DAVIS   | 934   |      |       | 952  | 947  |
| J. BRENNAN   |       | 955  | 955   | 1027 | 1080 |
|  |       |      |       | 1082 |      |
| D. MATTHEWS  |       | 1089 | 1089  | 1154 | 1167 |
| J. JUMEAU  |       | 1172 | 1176  |      |      |

IN THE COURT OF ARBITRATION FOR SPORT

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FLOYD LANDIS,

Appellant,

v. CAS 2007/A/1394

UNITED STATES ANTI-DOPING AGENCY,

Respondent.

-----x

VOLUME 5

March 24, 2008

9:05 a.m.

BEFORE:

MR. DAVID A.R. WILLIAMS, President

MR. DAVID RIVKIN, Arbitrator

MR. JAN PAULSSON, Arbitrator

REPORTED BY: GAIL F. SCHORR, C.S.R.

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09:05:32 2 P R O C E E D I N G S

09:05:50 3 THE PRESIDENT: Good morning,  
09:05:53 4 everybody. We begin with Ms. Garcia, I  
09:05:55 5 think.

09:05:56 6 MR. SUH: Before we begin, two  
09:05:57 7 administrative matters. One is we would  
09:06:00 8 make the request of the panel if we could  
09:06:02 9 go last today in order of our oral  
09:06:05 10 arguments. We did take a look at the  
09:06:08 11 rules and I had a little uncertainty  
09:06:10 12 about this when it came up on Saturday.  
09:06:13 13 The panel is correct that under CAS Rule  
09:06:18 14 44.2 that in an ordinary arbitration  
09:06:21 15 proceeding the respondent, who is the  
09:06:23 16 athlete, shall have the floor last and  
09:06:26 17 that the rules are silent with respect to  
09:06:29 18 the order of closing in the appellate  
09:06:32 19 rules. And therefore, it appears to be  
09:06:35 20 up to the panel. We simply request that  
09:06:37 21 we be allowed to go last.

09:06:45 22 THE PRESIDENT: Thank you.  
09:06:46 23 That's point number 1.

09:06:48 24 MR. SUH: And the second  
09:06:49 25 point is -- it has escaped me. And I'm



1 P R O C E E D I N G S

09:06:55 2 sure it will come to me. I don't think  
09:06:57 3 it was that substantial.

09:06:58 4 THE PRESIDENT: Don't be  
09:06:59 5 worried. It's a great relief to me to  
09:07:02 6 know that someone of your ability has  
09:07:04 7 the same problems that I have on Monday  
09:07:06 8 morning.

09:07:06 9 MR. SUH: Rest assured.

09:07:15 10 THE PRESIDENT: Shall we  
09:07:18 11 have a discussion about the order now  
09:07:20 12 and hear from you, Mr. Young.

09:07:22 13 MR. YOUNG: Sure.

09:07:26 14 THE PRESIDENT: Maybe, Mr.  
09:07:27 15 Suh, you might indicate why you think  
09:07:30 16 that's appropriate. Is it because it's  
09:07:33 17 an appeal and in an appeal system in  
09:07:37 18 the court system the Appellant usually  
09:07:41 19 goes last, is that basically it?

09:07:43 20 MR. SUH: I think that is  
09:07:45 21 one. And secondly, that the rules that  
09:07:47 22 are embodied at least in UCI Rule 238,  
09:07:51 23 which again is at the initial  
09:07:52 24 proceeding, and CAS Rule 44.2, and just  
09:07:56 25 to be clear that that's at the initial

1 P R O C E E D I N G S

09:07:57 2 proceeding too, grants the athlete the  
09:08:01 3 right to go last.

09:08:02 4 I think there's a policy  
09:08:06 5 embodied in those rules of allowing the  
09:08:08 6 athlete to respond. I think that  
09:08:10 7 although this is an appeal procedure  
09:08:12 8 and we've brought the appeal, which is  
09:08:14 9 clear, that in reality the nature of  
09:08:18 10 this case is that the allegations have  
09:08:20 11 been levied by USADA and that we are in  
09:08:24 12 the very real sense defending against  
09:08:26 13 them. Although we put them at issue,  
09:08:29 14 we are clearly defending against  
09:08:31 15 allegations at this stage and I think  
09:08:34 16 in terms of structure, although we are  
09:08:36 17 the Appellant, we are certainly much  
09:08:40 18 more in the position of defending in  
09:08:42 19 very much the same way that we would be  
09:08:45 20 in a lower proceeding below. And at  
09:08:50 21 least with respect to this sport the  
09:08:52 22 international governing body, the UCI  
09:08:55 23 has expressed, and again, at the  
09:08:58 24 original arbitration hearing, that the  
09:09:01 25 cyclists have the right to go last. If

1 P R O C E E D I N G S

09:09:02 2 I have missed the rule that governs  
09:09:06 3 this I'd like to be enlightened, but we  
09:09:11 4 reviewed them afterwards and did not  
09:09:12 5 find anything.

09:09:13 6 THE PRESIDENT: Mr. Young,  
09:09:14 7 you might like to comment and maybe in  
09:09:16 8 your comments you could -- I think  
09:09:28 9 there is another rule that the  
09:09:31 10 Secretary General has referred to, 57.  
09:09:41 11 If you look at the last paragraph of 57  
09:09:45 12 -- the last sentence of the first  
09:09:47 13 paragraph which says that in the appeal  
09:09:53 14 situation, it expressly says rules 44.2  
09:09:59 15 and 44.3 shall apply. Which coincides  
09:10:06 16 with, speaking for myself -- my  
09:10:09 17 colleagues would have far greater  
09:10:11 18 experience -- it coincides with my  
09:10:13 19 experience what happens in my  
09:10:15 20 experience of CAS appeals. I think the  
09:10:17 21 position may be that we're probably  
09:10:21 22 bereft of any authority to override  
09:10:26 23 what Rule 57 says, but --

09:10:29 24 MR. SUH: And certainly this  
09:10:32 25 isn't a big point, I don't want to take

1 P R O C E E D I N G S

09:10:33 2 up too much time on it. It is,  
09:10:36 3 however, in our reading, CAS 44.2,  
09:10:40 4 refers to the respondent, the  
09:10:41 5 respondent in that case is the athlete.  
09:10:43 6 So if 44.2 were to apply, in -- 44.2  
09:10:49 7 governs the proceeding below. And if  
09:10:53 8 in that case the respondent is always  
09:10:55 9 the athlete because the allegations are  
09:10:58 10 being levied against the athlete. So  
09:11:02 11 if CAS Rule 57 incorporates 44.2, we  
09:11:07 12 believe that it would by definition,  
09:11:09 13 although the respondent in this case  
09:11:10 14 has a different name as we have proved  
09:11:13 15 by the cover page of one of our own  
09:11:15 16 pleadings, that it's referring to the  
09:11:17 17 athlete.

09:11:18 18 Again, Mr. Chair, this to us  
09:11:20 19 is not a huge point. I just would ask  
09:11:22 20 -- I do believe that the panel does  
09:11:25 21 have in its discretion the right. I  
09:11:28 22 think in this case clearly the  
09:11:29 23 allegations are substantive, on the  
09:11:36 24 doping allegation are levied against us  
09:11:38 25 in a very similar way in the proceeding

1 P R O C E E D I N G S

09:11:40 2 down below, and we would ask the panel  
09:11:43 3 for the right to go last.

09:11:45 4 THE PRESIDENT: We'll hear  
09:11:47 5 briefly from Mr. Young and we'll  
09:11:49 6 cogitate on it in the course of the  
09:11:51 7 morning and tell you at the break.

09:11:52 8 MR. YOUNG: The panel got it  
09:11:54 9 right the first time. This is  
09:11:55 10 consistent with the rule and the way  
09:11:59 11 it's normally done. And if Mr. Suh  
09:12:01 12 wants to reserve five minutes or  
09:12:04 13 whatever it is from his opening hour to  
09:12:08 14 make a final comment, we wouldn't have  
09:12:11 15 any objection to that.

09:12:16 16 THE PRESIDENT: That's a  
09:12:17 17 very helpful observation. We'll come  
09:12:19 18 back to you at the morning break. In  
09:12:20 19 the meantime, perhaps we'll hear from  
09:12:22 20 Ms. Garcia.

09:12:24 21 MR. SUH: And so the panel  
09:12:25 22 is aware, I believe Mr. Weiss, although  
09:12:27 23 I said earlier I was going to question  
09:12:28 24 all the witnesses, Mr. Weiss will  
09:12:31 25 question Ms. Garcia.

1 P R O C E E D I N G S

09:12:33 2 MR. YOUNG: And we won't  
09:12:34 3 object.

09:12:36 4 THE PRESIDENT: Very good.  
09:12:42 5 This is in the nature of a splendid  
09:12:45 6 cameo appearance, Mr. Weiss.

09:12:47 7 MR. SUH: He's the brains  
09:12:48 8 behind the operation.

09:12:50 9 MR. RIVKIN: That's usually  
09:12:51 10 the case.

09:13:46 11 THE PRESIDENT: Mr. Paulsson  
09:13:48 12 will handle the formalities with the  
09:13:50 13 witness.

09:14:08 14 MR. PAULSSON: Good morning,  
09:17:27 15 Madam Garcia. You provided a brief  
09:17:31 16 statement and I think it's fair to say  
09:17:33 17 that you can expect that today's  
09:17:35 18 interview will also be brief. I will  
09:17:39 19 explain to you the process that will  
09:17:41 20 take place.

09:17:42 21 First of all, the lawyers  
09:17:43 22 who asked you to participate will ask  
09:17:45 23 you questions. Their adversaries may  
09:17:50 24 then ask questions. If the panel has  
09:17:52 25 questions for you, which it may, the

1 P R O C E E D I N G S

09:17:55 2 lawyers might then also after that have  
09:17:57 3 a chance to continue.

09:17:59 4 Let me first of all ask you  
09:18:05 5 are you alone?

09:18:10 6 MS. GARCIA: Yes, I'm alone  
09:18:11 7 in the room.

09:18:12 8 MR. PAULSSON: I'm asking  
09:18:13 9 you that to make sure that as long as  
09:18:14 10 you're alone there is no one who can  
09:18:17 11 influence you in any way.

09:18:21 12 MS. GARCIA: Well, my  
09:18:23 13 children are here, but I'll send them  
09:18:25 14 out.

09:18:25 15 MR. PAULSSON: No, they can  
09:18:26 16 stay.

09:18:27 17 First of all, I'm going to  
09:18:28 18 ask for your affirmation, do you swear  
09:18:31 19 or affirm that the evidence you give is  
09:18:33 20 honest and truthful under penalty of the  
09:18:35 21 penalties of perjury?

09:18:37 22 MS. GARCIA: Yes, I do so  
09:18:38 23 affirm.

09:18:40 24 MR. PAULSSON: Let me also  
09:18:41 25 explain to you that for clarity we ask

1 MYRIAM GARCIA - DIRECT

09:18:43 2 that you, as far as possible, issue  
09:18:47 3 your sentences in short phrases to  
09:18:50 4 allow time for the interpreter to  
09:18:53 5 interpret. In the interim now I'm  
09:18:57 6 going to pass you over to the lawyers  
09:19:00 7 after we just hear a translation of our  
09:19:03 8 brief conversation.

09:19:08 9 D I A N A C L A R K,  
10 called as the interpreter in this  
11 action, resumed, having been previously  
12 sworn.

13 M Y R I A M G A R C I A,  
14 called as a witness on behalf of the  
15 Respondent, having been first duly  
16 sworn by the Arbitrator (Jan Paulsson),  
17 was examined and testified through the  
09:19:09 18 interpreter as follows:

09:19:09 19 DIRECT EXAMINATION

09:19:10 20 BY MR. DUNN:

09:19:10 21 Q. Bonjour, Madam Garcia. My  
09:19:14 22 name is Dan Dunn. I'm one of the  
09:19:16 23 attorneys for USADA. I have only a  
09:19:25 24 couple of quick questions for you and  
09:19:26 25 then counsel for Mr. Landis will



1 MYRIAM GARCIA - DIRECT

09:19:28 2 examine you.

09:19:38 3 A. Fine.

09:19:39 4 Q. Ms. Garcia, you've submitted  
09:19:44 5 two statements in this proceeding,  
09:19:46 6 correct?

09:19:47 7 A. No, only one statement.

09:20:08 8 Q. I think the record reflects  
09:20:10 9 that there are two statements, one  
09:20:12 10 dated March 5 and one dated March 12.  
09:20:27 11 Do you have both of those with you, Ms.  
09:20:29 12 Garcia?

09:20:30 13 A. Yes, I have one statement in  
09:20:37 14 front of me.

09:20:40 15 Q. And what is the date of that  
09:20:42 16 statement?

09:20:52 17 A. It's the 5th of March.

09:21:00 18 Q. Ms. Garcia, we have a record  
09:21:02 19 before us that is a second declaration  
09:21:04 20 that you filed dated March 12th, and  
09:21:07 21 I'm not sure why you don't have it in  
09:21:09 22 front of you, but we have it here.

09:21:34 23 A. Okay, fine.

09:21:34 24 Q. So Ms. Garcia, just so we're  
09:21:37 25 clear here, do you recall now that

1 MYRIAM GARCIA - DIRECT

09:21:39 2 there were two separate statements you  
09:21:41 3 filed, one on March 5 and another on  
09:21:43 4 March 12th?

09:21:45 5 A. No, I don't remember.

09:22:01 6 Q. Ms. Garcia, is the March 12  
09:22:10 7 statement that you have -- I'm sorry,  
09:22:12 8 the March 5 statement that you have in  
09:22:15 9 front of you, is that the truth?

09:22:23 10 A. Yes, absolutely.

09:22:32 11 MR. DUNN: Thank you, Ms.  
09:22:33 12 Garcia. No further questions for now.

09:22:42 13 THE WITNESS: You're  
09:22:44 14 welcome.

09:23:14 15 MR. SUH: May we proceed?

09:23:17 16 THE PRESIDENT: Just one  
09:23:18 17 moment, please.

09:23:27 18 (Discussion off the record.)

09:23:27 19 THE PRESIDENT: Mr. Dunn, we  
09:23:28 20 obviously have to hear from you as to  
09:23:32 21 what should happen to the signed  
09:23:36 22 rebuttal statement, and it's probably  
09:23:40 23 best to deal with this now so that  
09:23:47 24 counsel knows what is going to happen  
09:23:50 25 here because Mr. Weiss at the moment is

1 MYRIAM GARCIA - DIRECT

09:23:59 2 needing only to cross examine on one  
09:24:02 3 statement and yet we have a curious  
09:24:04 4 position, we have a signed statement in  
09:24:05 5 the record which the witness doesn't  
09:24:07 6 seem to have with her.

09:24:11 7 MR. PAULSSON: Or remember.

09:24:13 8 THE PRESIDENT: Or recall.

09:24:14 9 MR. DUNN: May I take one  
09:24:15 10 second to confer with my colleague?

09:24:18 11 THE PRESIDENT: Yes.

09:24:50 12 (Discussion off the record.)

09:24:50 13 MR. DUNN: I apologize for  
09:24:51 14 the confusion, but we have the signed  
09:24:53 15 version of her March 12 and we can try  
09:24:55 16 to fax it to her or we can try to read  
09:24:57 17 it to her over the phone and refresh  
09:24:59 18 her memory that way.

09:25:03 19 MR. SUH: We would object to  
09:25:04 20 reading anything to her over the phone.

09:25:09 21 MR. PAULSSON: I assume it's  
09:25:11 22 a very --

09:27:29 23 THE PRESIDENT: Mr. Dunn,  
09:27:30 24 one preliminary question. How is it  
09:27:32 25 that she has received one statement

1 MYRIAM GARCIA - DIRECT

09:27:36 2 which she's ready to speak about but  
09:27:38 3 not the other?

09:27:45 4 MR. DUNN: That's a good  
09:27:46 5 question for which I do not have a good  
09:27:48 6 answer. My understanding is that she  
09:27:50 7 did have both, but apparently that did  
09:27:52 8 not happen. We know we have two that  
09:27:54 9 have been signed and submitted. I  
09:27:56 10 think the only practical resolution at  
09:27:58 11 this point would be for us to attempt  
09:28:00 12 to fax it to her and ask her if she  
09:28:02 13 recalls it and then call her back after  
09:28:04 14 that, but proceed now on the basis of  
09:28:06 15 her March 5 statement and reserve the  
09:28:11 16 questions on the March 12th statement  
09:28:14 17 until we get it in her hands.

09:28:22 18 THE PRESIDENT: Another way,  
09:28:23 19 and we'll have to hear Mr. Weiss on  
09:28:25 20 this, is to take the statement that she  
09:28:29 21 doesn't recall, the rebuttal statement,  
09:28:31 22 and read it to her and ask her whether  
09:28:35 23 she recalls that. If she says that she  
09:28:38 24 doesn't recall that, then that may be  
09:28:40 25 the end of the game.

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09:28:42 2 MR. WEISS: Mr. Chair, we  
09:28:44 3 would object to the reading of the  
09:28:45 4 declaration to Ms. Garcia to ask for  
09:28:48 5 her recollection. She doesn't recall  
09:28:49 6 the second declaration. And also if I  
09:28:51 7 may, the declaration that we were  
09:28:53 8 provided in terms of the signature  
09:28:55 9 page --

09:29:05 10 THE PRESIDENT: I think the  
09:29:07 11 March the 7th of the French version has  
09:29:10 12 a signature and the English version  
09:29:13 13 doesn't. The March 12 does have a  
09:29:16 14 signature.

09:29:17 15 MR. DUNN: None of the  
09:29:18 16 English versions have signatures.

09:29:35 17 THE PRESIDENT: What the  
09:29:36 18 panel has decided, we note the  
09:29:38 19 objection, but what we propose is that  
09:29:41 20 Mr. Paulsson read her some parts of the  
09:29:47 21 supplementary statement and we'll  
09:29:48 22 ascertain whether she has any  
09:29:50 23 recollection. It's preferable that I  
09:29:52 24 think he does that rather than counsel  
09:29:55 25 in the circumstances. That's what

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09:30:10 2 we're going to do, Mr. Dunn, and Mr.  
09:30:12 3 Weiss.

09:30:13 4 MR. WEISS: Thank you very  
09:30:14 5 much.

09:30:15 6 MR. DUNN: Again, my  
09:30:16 7 apologies. Ms. Garcia, we have in front  
09:31:00 8 of us your March 12 statement in French  
09:31:03 9 in addition to your March 5 statement in  
09:31:05 10 French. Mr. Paulsson is going to read  
09:31:11 11 you parts of your second declaration to  
09:31:13 12 see if you can refresh your recollection.

09:31:17 13 MR. SUH: We'd object to the  
09:31:19 14 characterization of the second statement  
09:31:20 15 as hers until there's sufficient --

09:31:22 16 MR. PAULSSON: Let me do it.

09:31:25 17 THE PRESIDENT: It was  
09:31:26 18 inappropriate, Mr. Dunn, to phrase it  
09:31:27 19 that way. But we'll proceed.

09:31:29 20 MR. PAULSSON: Madam Garcia,  
09:31:53 21 I'm going to explain to you what we're  
09:31:54 22 going to do. We have in front of us  
09:31:56 23 the text of a document which bears a  
09:31:58 24 signature which does appear to be  
09:32:01 25 yours.

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09:32:01 2 THE WITNESS: Okay.

09:32:04 3 MR. PAULSSON: The declaration  
09:32:26 4 that we have in front of us, I'm asking  
09:32:30 5 you if you have in front of you the first  
09:32:32 6 declaration dated March 5th.

09:32:40 7 THE WITNESS: Yes, I have  
09:32:41 8 it. I don't have the other one, I'm  
09:32:43 9 really sorry, I think I should have had  
09:32:45 10 it but I don't have it. I'm sorry.

09:32:48 11 MR. PAULSSON: This is not a  
09:32:55 12 criticism, this is just to clarify  
09:32:57 13 where things stand. The second text  
09:33:05 14 that I have in front of me appears to  
09:33:14 15 be quotations from a statement made by  
09:33:20 16 Dr. Goldberger. Does this remind you  
09:33:33 17 of anything that you made a second  
09:33:35 18 statement that refuted some statements  
09:33:37 19 made by Dr. Goldberger?

09:33:41 20 THE WITNESS: I would have  
09:33:49 21 to read it in order to know whether I  
09:33:50 22 recall it.

09:33:53 23 MR. PAULSSON: The text that  
09:34:16 24 we have in front of us starts with a  
09:34:18 25 quotation in English. This is Dr.

1 MYRIAM GARCIA - DIRECT

09:34:24 2 Goldberger's statement. Do you agree  
09:34:28 3 with that?

09:34:29 4 THE WITNESS: Yes, I see.

09:34:37 5 MR. PAULSSON: She just noted  
09:34:39 6 what I said. Following that we have what  
09:34:50 7 appears to be the text of the declaration  
09:34:52 8 itself, of the statement itself,  
09:34:56 9 supposedly your words.

09:34:59 10 THE WITNESS: Yes.

09:35:11 11 MR. PAULSSON: In rebuttal  
09:35:16 12 -- excuse me, I'm just reading the text  
09:35:19 13 which has already been translated. So  
09:35:21 14 maybe it doesn't need to be translated.

09:35:27 15 MR. SUH: It doesn't need to  
09:35:29 16 be.

09:36:18 17 MR. PAULSSON: Now that you  
09:36:19 18 hear it does this remind you of anything?

09:36:22 19 THE WITNESS: Yes, that's  
09:36:23 20 what I wrote.

09:37:22 21 MR. PAULSSON: Is this still  
09:37:24 22 reminding you of anything?

09:37:26 23 THE WITNESS: Yes, absolutely.

09:38:14 24 MR. PAULSSON: Now, do you  
09:38:15 25 remember having signed a statement to



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09:38:17 2 that effect?

09:38:19 3 THE WITNESS: Yes.

09:38:22 4 MR. PAULSSON: Thank you.

09:38:26 5 CONTINUED DIRECT EXAMINATION

09:38:26 6 BY MR. DUNN:

09:38:27 7 Q. Thank you, Ms. Garcia. This  
09:38:27 8 is Dan Dunn, counsel for USADA.

09:38:36 9 Now that we've clarified  
09:38:37 10 that, are the statements that you made  
09:38:39 11 both in your March 5 and March 12  
09:38:41 12 declarations accurate and true?

09:39:04 13 A. Yes, absolutely, both  
09:39:13 14 statements are true and correct.

09:39:17 15 MR. DUNN: Thank you, Ms.  
09:39:22 16 Garcia. No further questions.

09:39:25 17 THE PRESIDENT: Mr. Weiss.

09:39:27 18 CROSS EXAMINATION

09:39:32 19 BY MR. WEISS:

09:39:32 20 Q. Good afternoon, Ms. Garcia.  
09:39:37 21 Ms. Garcia, may I direct your attention  
09:39:39 22 to your witness statement of March 5.

09:39:54 23 A. Yes.

09:39:55 24 Q. To the second sentence under  
09:39:56 25 the heading "Chain of custody of bottle

1 MYRIAM GARCIA - CROSS

09:40:02 2 995474 A." It's RD 9.4. Ms. Garcia,  
09:40:20 3 in your witness declaration you state  
09:40:22 4 that on July 21st, 2006, at 9:10 you  
09:40:29 5 had custody of the A sample of 995474?

09:40:50 6 A. Yes, absolutely.

09:40:51 7 Q. Do you specifically recall  
09:40:52 8 having possession of the A sample  
09:40:54 9 bottle, aside from any documents?

09:41:12 10 A. At 9:10 I had in my  
09:41:23 11 possession the series 995474 A. And  
09:41:31 12 among others -- I had a series in my  
09:41:55 13 possession which included sample 995474

09:42:02 14 A.

09:42:04 15 Q. Ms. Garcia, what I'm asking  
09:42:06 16 you is whether sitting here today, do  
09:42:08 17 you have a specific recollection of  
09:42:10 18 possessing sample 995474?

09:42:40 19 A. Today I think I remember  
09:42:46 20 that I had that bottle in my hand. I  
09:42:50 21 must have had that bottle in my hand.  
09:42:55 22 If that had not been the case an  
09:43:03 23 anomaly report would have been prepared  
09:43:05 24 by me.

09:43:07 25 Q. Now, Ms. Garcia, I'm not

1 MYRIAM GARCIA - CROSS

09:43:09 2 asking you whether you must have had  
09:43:11 3 the bottle in your hand. What I'm  
09:43:13 4 asking is whether you specifically  
09:43:14 5 recall sitting here today having the  
09:43:17 6 bottle 995474 in your possession.

09:43:49 7 A. No, I don't. No. Two years  
09:43:58 8 is too long for me to remember exactly.

09:44:02 9 Q. Now, Ms. Garcia, your witness  
09:44:04 10 statement says that you obtained custody  
09:44:06 11 of the sample bottle at 9:10 on July  
09:44:10 12 21st. Sitting here today do you recall  
09:44:12 13 where and how you obtained this sample  
09:44:14 14 bottle?

09:44:18 15 A. Would you please repeat the  
09:44:49 16 question.

09:44:55 17 (Record read as requested.)

09:45:22 18 A. No, I don't because obviously  
09:45:26 19 two years is too long, but in fact the  
09:45:35 20 document is there to give witness.

09:45:45 21 Q. Ms. Garcia, do you recall  
09:45:46 22 how you obtained the sample bottle?  
09:45:51 23 For instance, do you recall which  
09:45:52 24 operator, or if not an operator, which  
09:45:56 25 room you received the sample bottle in?

1 MYRIAM GARCIA - CROSS

09:45:59 2 A. Well, two years ago as of  
09:46:31 3 today I cannot remember exactly what  
09:46:33 4 the details were how I received that  
09:46:36 5 bottle.

09:46:38 6 Q. Ms. Garcia, were you present  
09:46:39 7 when the sample bottle was removed from  
09:46:42 8 the refrigerator on the morning of July  
09:46:45 9 21st, 2006?

09:46:47 10 A. I couldn't hear you. Please  
09:47:07 11 repeat.

09:47:08 12 (Record read as requested.)

09:47:24 13 A. I don't think so but I  
09:47:28 14 cannot absolutely affirm that.

09:47:32 15 Q. Now, Ms. Garcia, in your  
09:47:34 16 rebuttal declaration that we were  
09:47:36 17 speaking about a few minutes ago.

09:47:39 18 MR. DUNN: Todd, that's RR  
09:47:41 19 9.8.

09:47:41 20 Q. And I'll read it to you  
09:47:43 21 since I know that you don't have it,  
09:47:44 22 you state "When I wrote down the time  
09:47:47 23 of removal of 995474 A bottle from  
09:47:51 24 CH.FR1 and the operator code of the  
09:47:55 25 person who did it, I made two mistakes.

1 MYRIAM GARCIA - CROSS

09:47:57 2 I wrote down 7:30 a.m. instead of 7:25  
09:48:02 3 a.m. and operator code 42 instead of  
09:48:05 4 44."

09:48:52 5 Ms. Garcia, I'd also like to  
09:48:54 6 turn your attention to Exhibit 103,  
09:49:00 7 LNDD 1591.

09:49:13 8 A. Yes.

09:49:14 9 Q. Ms. Garcia, do you have that  
09:49:17 10 document with you?

09:49:19 11 A. Yes, yes.

09:49:20 12 Q. Ms. Garcia, how is it if you  
09:49:23 13 do not remember what occurred on July  
09:49:27 14 21st with respect to the A bottle that  
09:49:29 15 you know that when you wrote that  
09:49:33 16 operator 42 removed the bottle, the A  
09:49:37 17 sample bottle from CH.FR1 at 7:30, that  
09:49:41 18 it was a mistake?

09:49:45 19 A. Well, I think it was a  
09:50:27 20 mistake. Taking into account the fact  
09:50:31 21 that Mr. Martin's document said so. So  
09:50:40 22 I think I made a mistake. It's from  
09:50:45 23 the documents.

09:50:49 24 Q. So Ms. Garcia, in testifying  
09:50:51 25 that your document was a mistake you're

1 MYRIAM GARCIA - REDIRECT

09:50:54 2 relying solely upon the previous  
09:50:57 3 document, 1590, the document prepared  
09:50:59 4 by Mr. Martin?

09:51:03 5 A. Yes.

09:51:24 6 Q. And so to be clear, you have  
09:51:27 7 no independent recollection of this  
09:51:30 8 line in this document on 1591 as being  
09:51:33 9 incorrect?

09:51:34 10 A. No.

09:51:48 11 Q. Ms. Garcia, one last  
09:51:51 12 question. Do you recall on July 21st,  
09:51:54 13 2006 whether operator 42 was present in  
09:51:57 14 the laboratory that morning?

09:51:59 15 A. From memory, no.

09:52:18 16 MR. WEISS: No further  
09:52:19 17 questions.

09:52:19 18 THE WITNESS: Thank you.

09:52:21 19 REDIRECT EXAMINATION

09:52:23 20 BY MR. DUNN:

09:52:23 21 Q. Ms. Garcia, this is Dan Dunn  
09:52:26 22 again, counsel for USADA. Could you  
09:52:33 23 please look at what's been marked as  
09:52:36 24 LNDD 1591.

09:52:52 25 A. I'm sorry, my kids are

1 MYRIAM GARCIA - REDIRECT

09:52:53 2 making a noise, I couldn't hear what

09:52:55 3 you said. Could you repeat that.

09:53:13 4 (Record read as requested.)

09:53:13 5 A. Yes.

09:53:13 6 Q. Do you have that in front of

09:53:15 7 you right now?

09:53:16 8 A. Yes.

09:53:17 9 Q. Now looking at the middle

09:53:18 10 part of the form, is that in your

09:53:20 11 handwriting?

09:53:29 12 A. Yes.

09:53:30 13 Q. And your operator code is

09:53:32 14 number 19?

09:53:34 15 A. Yes, absolutely.

09:53:37 16 Q. Now, with the benefit of

09:53:40 17 document 1591, what day does it show

09:53:45 18 that you received the sample 995474?

09:54:02 19 A. Do you mean the date?

09:54:17 20 THE INTERPRETER: Yes.

09:54:17 21 A. It was 21/07/06.

09:54:20 22 Q. And what purpose were you

09:54:22 23 handling the A bottle?

09:54:26 24 A. So that I could do the -- so

09:54:37 25 that I could aliquot it.

1 MYRIAM GARCIA - REDIRECT

09:54:40 2 Q. Does this page we're looking  
09:54:42 3 at, Ms. Garcia, reflect the time that  
09:54:44 4 you did your aliquoting?

09:54:48 5 A. Yes, indeed.

09:54:57 6 Q. And what time is that?

09:55:01 7 A. 9:10.

09:55:03 8 Q. Ms. Garcia, look at the very  
09:55:06 9 top line of the chart which in French  
09:55:11 10 reads heure de stockage de CH.FR1.

09:55:33 11 A. Yes.

09:55:34 12 Q. Now, in your rebuttal  
09:55:36 13 statement you indicate that the time  
09:55:39 14 you wrote down there, 7 hours and 30  
09:55:42 15 minutes, and the operator code number  
09:55:46 16 42 were mistakes. Do you remember  
09:55:48 17 that?

09:56:03 18 A. Yes.

09:56:03 19 Q. Now, is the information on  
09:56:05 20 this line based on your firsthand  
09:56:08 21 observations or information provided to  
09:56:10 22 you by someone else?

09:56:31 23 A. No, this was from my  
09:56:33 24 personal direct observation at the time  
09:56:34 25 two years ago.



1 MYRIAM GARCIA - REDIRECT

09:56:36 2 Q. Did you actually see bottle  
09:56:39 3 995474 removed from the refrigerator?

09:56:45 4 A. No.

09:57:00 5 Q. And if you would look at  
09:57:03 6 another page you should have with you,  
09:57:05 7 which is marked LNDD 1590. Can you  
09:57:10 8 take a look at that.

09:57:20 9 A. Yes.

09:57:21 10 Q. And what do you recognize  
09:57:22 11 this document to be?

09:57:26 12 A. Yes, it's the PO separation  
09:57:55 13 log.

09:58:00 14 Q. And if you would go down to  
09:58:02 15 the chart that appears in the middle  
09:58:10 16 where it says in the column that's  
09:58:12 17 labeled "Operation," and the first row  
09:58:16 18 where it says "bottles taken into  
09:58:39 19 custody."

09:58:40 20 A. Yes.

09:58:42 21 Q. And do you recognize this  
09:58:43 22 document has been prepared by Mr.  
09:58:48 23 Laurent Martin?

09:59:00 24 A. All I can say is it's his  
09:59:05 25 initials.

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09:59:07 2 Q. And what time does it  
09:59:09 3 indicate that the author of this  
09:59:13 4 document came into possession of the A  
09:59:18 5 bottle?

09:59:39 6 A. It says here 7:25.

09:59:42 7 Q. Now skip down two rows to  
09:59:44 8 the row labeled bottles transferred.

10:00:00 9 A. Yes.

10:00:01 10 Q. And what time is indicated  
10:00:02 11 there?

10:00:08 12 A. 9 o'clock.

10:00:09 13 Q. And to the right of there  
10:00:11 14 there's a box labeled sale 006, room  
10:00:17 15 006. Do you see that?

10:00:29 16 A. Yes.

10:00:29 17 Q. Now with the benefit of both  
10:00:31 18 of these pages in front of you, 1590  
10:00:33 19 and 1591, do you have any doubt that  
10:00:40 20 somewhere between 9 and 9:30 you were  
10:00:43 21 in possession of bottle 995474?

10:00:54 22 A. No, I have no doubt.

10:01:20 23 Q. Is room 006 within the  
10:01:23 24 controlled area of the lab?

10:01:26 25 A. Yes, absolutely.

1 MYRIAM GARCIA - REDIRECT

10:01:38 2 Q. When you were finished doing  
10:01:41 3 your aliquoting for conventional  
10:01:49 4 prohibited substances, what did you do  
10:01:51 5 with the bottle?

10:01:53 6 A. I returned it to the cold  
10:02:08 7 room.

10:02:09 8 Q. And is that reflected on  
10:02:12 9 Page 1591 anywhere?

10:02:25 10 A. Yes, it is. In the middle  
10:02:27 11 of the page, time of returning to cold  
10:02:34 12 room 1, 9:25, operator code 19.

10:02:47 13 Q. Ms. Garcia, one other  
10:02:49 14 question. Did the A bottle remain in  
10:02:53 15 your possession or under your control  
10:02:56 16 in room 006 between the time you  
10:03:00 17 received it from Mr. Martin until you  
10:03:03 18 put it in the refrigerator?

10:03:07 19 MR. SUH: Objection;  
10:03:08 20 leading.

10:03:12 21 MR. DUNN: Is Mr. Suh  
10:03:14 22 allowed to object?

10:03:17 23 THE PRESIDENT: The answer  
10:03:17 24 to your question is yes, the Appellant  
10:03:20 25 is allowed to object. But the question

1 MYRIAM GARCIA - REDIRECT

10:03:23 2 is not a leading question and it may be  
10:03:33 3 answered.

10:03:39 4 A. Yes.

10:03:56 5 MR. DUNN: Thank you, Ms.

10:03:57 6 Garcia. No further questions.

10:04:03 7 THE WITNESS: Thank you.

10:04:05 8 THE PRESIDENT: The tribunal  
10:04:06 9 has no questions. Thank you very much  
10:04:08 10 for your assistance.

10:04:16 11 THE WITNESS: Thank you very  
10:04:17 12 much.

10:04:24 13 MR. PAULSSON: Good-by, you  
10:04:25 14 can hang up.

10:05:10 15 MR. BARNETT: One quick  
10:05:11 16 procedural matter. The copies of the  
10:05:13 17 transcript and the attached word search  
10:05:15 18 are ready if the panel would like them.

10:05:17 19 THE PRESIDENT: Thank you  
10:05:18 20 very much. We would.

10:06:02 21 Just for the record, what  
10:06:04 22 we've received is the AAA transcript,  
10:06:06 23 and a copy will be supplied to the  
10:06:08 24 Appellant's counsel as well.

10:06:16 25 MR. SUH: Thank you.

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10:06:17 2 Are we going to proceed with  
10:06:40 3 Dr. Ayotte?

10:07:48 4 MR. YOUNG: Yes.

10:08:00 5 THE PRESIDENT: Good morning,  
10:08:01 6 professor.

10:08:07 7 DR. AYOTTE: Bonjour.

10:08:09 8 THE PRESIDENT: I begin by  
10:08:10 9 asking you, please, to declare and  
10:08:11 10 affirm that the expert opinions you  
10:08:14 11 represent will express your sincere and  
10:08:16 12 honestly held views?

10:08:19 13 DR. AYOTTE: Yes, I will.

10:08:27 14 THE PRESIDENT: Thank you  
10:08:27 15 very much. The procedure we've been  
10:08:29 16 following would have been evident to  
10:08:31 17 you in your observations here. Mr.  
10:08:34 18 Young will begin by having you confirm  
10:08:37 19 your statements. Mr. Suh will then  
10:08:40 20 cross examine. Mr. Young may reexamine  
10:08:43 21 and we may have some questions as well.  
10:08:45 22 If we do so, counsel will have the  
10:08:48 23 right to ask follow-up questions.

10:08:52 24 If you are shown documents  
10:08:54 25 you haven't seen before or you haven't

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10:08:56 2 seen for some time and you wish to read  
10:09:01 3 them before you answer, you're  
10:09:02 4 perfectly entitled to take time to do  
10:09:04 5 that. All understood?

10:09:06 6 THE WITNESS: Yes, thanks.

10:09:08 7 THE PRESIDENT: Mr. Young.

10:09:08 8 C H R I S T I A N E A Y O T T E,  
10:09:08 9 called as a witness on behalf of the  
10:09:08 10 Respondent, having been first duly  
10:09:08 11 affirmed by the President, was examined  
10:09:09 12 and testified as follows:

10:09:09 13 DIRECT EXAMINATION

10:09:12 14 BY MR. YOUNG:

10:09:12 15 Q. Dr. Ayotte, you've submitted  
10:09:16 16 a witness statement and a rebuttal in  
10:09:18 17 this case?

10:09:18 18 A. Yes, I did.

10:09:19 19 Q. Are there any corrections  
10:09:20 20 that you need to make to those  
10:09:21 21 documents?

10:09:21 22 A. Unfortunately, I just noticed  
10:09:23 23 by going through my witness statement  
10:09:29 24 that I had made two errors, two mistakes.

10:09:33 25 Q. Could you point those out,

1 CHRISTIANE AYOTTE- DIRECT

10:09:35 2 please.

10:09:35 3 A. The first one would be in my  
10:09:37 4 first statement at Page 6, paragraph  
10:09:44 5 14, third line. When describing the  
10:09:48 6 composition of the Mix Cal Acetate I  
10:09:52 7 have wrongly indicated the third  
10:09:56 8 steroid as being androsterone instead  
10:09:59 9 of the -- it should have been written  
10:10:01 10 the 5-beta diol.

10:10:10 11 Q. Any others?

10:10:11 12 A. And the second one would be  
10:10:13 13 at Page 9, paragraph 20, the third line  
10:10:27 14 where I have indicated the number of  
10:10:28 15 the bottle as being 975474 and it is  
10:10:35 16 995474.

10:10:38 17 Q. Any other corrections?

10:10:39 18 A. No.

10:10:43 19 Q. With those corrections, do  
10:10:44 20 you accept this witness statement and  
10:10:46 21 rebuttal?

10:10:49 22 A. Yes, I do.

10:10:50 23 MR. YOUNG: Thank you.

10:10:57 24 THE PRESIDENT: Mr. Suh.

10:10:59 25

1 CHRISTIANE AYOTTE- CROSS

10:10:59 2 CROSS EXAMINATION

10:11:00 3 BY MR. SUH:

10:11:00 4 Q. Good morning.

10:11:01 5 A. Good morning.

10:11:01 6 Q. I'd like to turn your  
10:11:02 7 attention to Exhibit GDC 1354. Have  
10:11:13 8 you seen GDC 1354 before?

10:11:16 9 A. Yes, you've presented this  
10:11:17 10 last year to me.

10:11:18 11 Q. And that is a picture of you  
10:11:20 12 there, correct?

10:11:21 13 A. I will answer the same way.  
10:11:22 14 Unfortunately, yes, it is me.

10:11:24 15 Q. And the picture and the  
10:11:27 16 Christiane Ayotte referred to is you,  
10:11:31 17 right?

10:11:31 18 A. Yes.

10:11:31 19 Q. I'd like to turn your  
10:11:33 20 attention down to the fourth full  
10:11:36 21 paragraph where there's a quote from  
10:11:37 22 you and I would ask --

10:11:41 23 MR. SUH: Perhaps I'd ask  
10:11:43 24 Mr. Paulsson, since our translator has  
10:11:45 25 left the room, to translate the quoted



1 CHRISTIANE AYOTTE- CROSS

10:11:47 2 portion.

10:11:48 3 MR. PAULSSON: The

10:11:54 4 quotation, yes. "When athletes and

10:11:58 5 rich American lawyers fight against the

10:12:00 6 validity of tests and controls, it's

10:12:02 7 necessary to be creative. And since

10:12:07 8 judges and lawyers arbitrate these

10:12:12 9 legal cases, it is necessary to be able

10:12:16 10 to render the information in a column

10:12:23 11 in common terms," "in ordinary

10:12:29 12 language."

10:12:30 13 Q. I'd like to turn your

10:12:31 14 attention to the first part of that

10:12:33 15 quote where you say "it is necessary to

10:12:35 16 be creative" with an exclamation mark.

10:12:38 17 Do you see that?

10:12:38 18 A. Yes, I see that, but you of

10:12:41 19 course understand that it is not me

10:12:43 20 writing this. A reporter quoted me or

10:12:48 21 interpreted or put my words as this,

10:12:50 22 yes.

10:12:51 23 Q. So your testimony here today

10:12:54 24 is that the reporter misquoted you

10:12:58 25 about this statement about being

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10:13:00 2 creative?

10:13:00 3 A. This is not what I've said.

10:13:02 4 What I said was that you have to

10:13:05 5 realize that it is not me who wrote

10:13:08 6 this article, but somebody wrote it.

10:13:10 7 And the topic, by the way, of that

10:13:13 8 paper was about creativity in science

10:13:17 9 and in our field.

10:13:19 10 Q. Are you saying that this

10:13:23 11 quote in which you say "When rich

10:13:26 12 American lawyers fight the validity of

10:13:28 13 tests and controls, you must be

10:13:31 14 creative," are you saying that you did

10:13:33 15 not say that?

10:13:34 16 A. Basically I agree that it is

10:13:37 17 basically the -- it can be viewed as

10:13:44 18 what I had in mind to answer his

10:13:46 19 question. Yes, let's say it's okay.

10:13:48 20 Q. I want to be precise. Those

10:13:49 21 are your words, correct?

10:13:51 22 A. No. No. I won't fight this

10:13:52 23 as written, but it's not as if I --

10:13:55 24 it's not really my words, but it means

10:13:58 25 -- I agree to basically what it's

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10:14:01 2 saying. I agree to it, let's say.

10:14:03 3 Q. And you would agree with me  
10:14:06 4 that the scientific test results of any  
10:14:10 5 laboratory are measured by objective  
10:14:15 6 criteria, correct?

10:14:16 7 A. Definitely.

10:14:17 8 Q. And that objective criteria  
10:14:20 9 doesn't change before an athlete  
10:14:22 10 chooses to contest it or after,  
10:14:24 11 correct, they are what they are?

10:14:25 12 A. Absolutely.

10:14:26 13 Q. And so explain to me what  
10:14:32 14 you could possibly mean by you must be  
10:14:35 15 creative when an athlete would  
10:14:37 16 challenge the validity of a test?

10:14:41 17 A. You have to be creative to  
10:14:43 18 find ways to explain in layman term --  
10:14:47 19 in layman terms what that science --  
10:14:50 20 what science is.

10:14:51 21 Q. But that isn't what this  
10:14:54 22 quote says, is it? It doesn't say that  
10:14:57 23 you must be creative to explain in  
10:15:00 24 layman's terms what the science is,  
10:15:03 25 that's not what this says, correct?

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10:15:05 2 A. I think it is what it says.

10:15:07 3 Q. You recognize that the  
10:15:09 4 explanation of being able to talk and  
10:15:12 5 explain about science in layman's terms  
10:15:14 6 comes in the second sentence and not  
10:15:16 7 the first sentence, correct?

10:15:18 8 A. Yes. It goes along.  
10:15:21 9 There's a starting quote and an end  
10:15:23 10 quote and that does, I'm telling you  
10:15:25 11 what in that context those two phrases  
10:15:30 12 are meaning.

10:15:31 13 Q. What would the insertion by  
10:15:36 14 you of the term "rich American lawyers"  
10:15:40 15 have anything to do with explaining in  
10:15:42 16 your words the test processes in a  
10:15:49 17 layperson's sense? What does it matter  
10:15:51 18 if it's a rich American lawyer or a  
10:15:53 19 poor American lawyer or a rich French  
10:15:56 20 lawyer or a poor French lawyer or a  
10:15:58 21 rich Swiss lawyer or a poor Swiss  
10:16:01 22 lawyer or a rich or poor anything?  
10:16:04 23 Isn't it true that science is what it  
10:16:07 24 is?

10:16:07 25 A. Yes, but the way that -- in

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10:16:10 2 the context of our field, the fight  
10:16:14 3 against doping -- and again, bear with  
10:16:18 4 me, we are -- I'm living in Montreal  
10:16:21 5 and this is in North America, so me  
10:16:24 6 referring to American lawyers is  
10:16:27 7 something that rings a bell in my  
10:16:30 8 country. Referring to Pakistan or to  
10:16:33 9 anywhere else lawyers would not ring a  
10:16:35 10 bell.

10:16:36 11 So in my culture it clearly  
10:16:42 12 states, and we know that the culture of  
10:16:44 13 American lawyers in my country is the  
10:16:46 14 one that can be -- how can I say? --  
10:16:50 15 that can be frightening. You know,  
10:16:54 16 it's set the context. American lawyers  
10:16:56 17 are having powers and they fight by all  
10:16:59 18 means the test results. So this is  
10:17:03 19 where I said that you have to be -- and  
10:17:06 20 with big resources. So this is the  
10:17:09 21 contextual background in my country.

10:17:13 22 Q. When you say rich American  
10:17:15 23 lawyers is it your testimony you're  
10:17:17 24 referring to Canadian lawyers?

10:17:19 25 A. This is not what I've said.

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10:17:21 2 I'm saying that American lawyers in my  
10:17:25 3 culture are believed to be, and I don't  
10:17:29 4 know how to say this without --

10:17:32 5 MR. PAULSSON: Intimidating.

10:17:36 6 A. Yes, intimidating. So in my  
10:17:38 7 country we have Quebec lawyers, we have  
10:17:40 8 Canadian lawyers, but if you speak to a  
10:17:43 9 person of a culture of American legal  
10:17:45 10 system we think that American style --  
10:17:50 11 the style of American lawyer may be  
10:17:52 12 intimidating.

10:17:53 13 Q. And therefore, you must be  
10:17:54 14 creative?

10:17:55 15 A. I certainly have to be --  
10:17:58 16 well, I was answering your question.  
10:18:00 17 How do you -- how are you creative in  
10:18:03 18 that field and I answer it that way,  
10:18:05 19 yes, of course. It doesn't mean that I  
10:18:08 20 -- that I would invent stuff to defend  
10:18:13 21 the -- to defend, to give evidence. It  
10:18:16 22 just said that you have -- again, I'm  
10:18:18 23 telling you what I told the guy, I had  
10:18:21 24 -- I have to be creative to put in  
10:18:25 25 layman terms science.

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10:18:29 2 Q. Isn't invention what  
10:18:32 3 creation really is? Isn't creativity  
10:18:35 4 invention?

10:18:36 5 A. No, not at all. I don't  
10:18:37 6 view it that way. Creativity means  
10:18:44 7 using all your resources and your --  
10:18:49 8 what can I say? -- your resources to  
10:18:52 9 come to the point.

10:18:54 10 Q. Do you believe that every  
10:18:57 11 single test result issued by any  
10:19:01 12 laboratory is valid?

10:19:05 13 A. No. And I know that there  
10:19:09 14 has to be a review process making such  
10:19:13 15 that those results were properly  
10:19:15 16 acquired and that the finding reports  
10:19:19 17 were of value, which is my role by the  
10:19:21 18 way in my life, to verify such results.

10:19:24 19 Q. But in your statement here  
10:19:26 20 you don't say that it is only necessary  
10:19:29 21 to be creative with respect to valid  
10:19:33 22 test results. You say "when American  
10:19:36 23 lawyers get involved to contest the  
10:19:38 24 validity of tests and controls you must  
10:19:40 25 be creative," referring to all contests

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10:19:46 2 of the validity of testing?

10:19:48 3 A. Well, sir, I can just tell  
10:19:49 4 you this is a one-page article written  
10:19:51 5 by someone and you're trying to infer  
10:19:54 6 my -- that my day-to-day professional  
10:19:57 7 practice is different. So you can  
10:20:01 8 continue asking questions about that  
10:20:03 9 paragraph, but again, I'm telling you  
10:20:05 10 it says what it says but at the same  
10:20:09 11 thing it has nothing to do with what is  
10:20:11 12 my normal practice in going and  
10:20:14 13 reviewing cases from other labs.

10:20:17 14 Q. Did you ever attempt to  
10:20:18 15 correct or send a letter or email to  
10:20:22 16 correct this statement to reflect the  
10:20:26 17 sentiment you have expressed here  
10:20:28 18 today?

10:20:28 19 A. Absolutely not. It's a  
10:20:30 20 nonissue for me. It's a nonissue.  
10:20:32 21 It's absolutely not important and I  
10:20:34 22 don't view that paragraph as being  
10:20:36 23 misleading.

10:20:43 24 Q. Last time you testified in  
10:20:47 25 connection with this matter you



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10:20:48 2 testified that you have never been  
10:20:49 3 hired by an athlete accused of a doping  
10:20:53 4 offense to attend a B sample, correct?

10:20:55 5 A. No, I was never asked by an  
10:20:57 6 athlete to attend the B sample.

10:20:59 7 Q. And that still is true from  
10:21:01 8 the time that that occurred to today,  
10:21:05 9 right?

10:21:06 10 A. Yes.

10:21:07 11 Q. At the time you explained,  
10:21:09 12 last time you explained that the WADA  
10:21:11 13 code, the WADA code's laboratory code  
10:21:14 14 of ethics requires, or prevents you  
10:21:17 15 from giving assistance to athletes in  
10:21:20 16 connection with doping allegations,  
10:21:22 17 right?

10:21:22 18 A. Yes, this is -- and if --  
10:21:25 19 since you are giving me this  
10:21:26 20 opportunity I would like to clarify.  
10:21:31 21 Of course the standard is not, is not  
10:21:34 22 in favor of the lab directors in  
10:21:38 23 general and me in particular providing  
10:21:41 24 assistance or siding along -- siding  
10:21:45 25 meaning defending, helping an athlete

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10:21:48 2 to fight a doping allegation. And that  
10:21:55 3 has basis -- that has a basis in ISO  
10:21:57 4 and in the ISO norm and requirements.  
10:22:03 5 A lab and its lab director is not  
10:22:07 6 supposed to engage or have any  
10:22:12 7 practices that would undermine the  
10:22:13 8 confidence the client has in its  
10:22:20 9 operation.

10:22:20 10 So if I were, for example,  
10:22:23 11 to defend a Canadian athlete who has  
10:22:27 12 been tested positive by the lab in  
10:22:30 13 Penang for the presence of a prohibited  
10:22:34 14 substance, that would certainly in my  
10:22:36 15 view undermine my credibility as a lab  
10:22:41 16 director. It would be viewed as if I  
10:22:49 17 were defending athletes in my country.  
10:22:51 18 So we have to remain -- to remain  
10:22:57 19 neutral and objective, and it is not  
10:23:00 20 our role to go against directly in that  
10:23:04 21 manner against a finding.

10:23:08 22 Q. Now you're talking there  
10:23:09 23 about politics and not about science,  
10:23:11 24 right? I mean you're saying, well, if  
10:23:13 25 you would contest an allegation brought

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10:23:16 2 by another country or another doping  
10:23:18 3 organization or another lab that it  
10:23:21 4 might undermine confidence in a test  
10:23:24 5 that you would conduct in connection  
10:23:25 6 with a Canadian athlete; is that right?

10:23:28 7 A. I'm talking in terms of ISO  
10:23:31 8 requirement and credibility requirement.

10:23:36 9 Q. So you feel that your  
10:23:38 10 credibility is enhanced by a rule that  
10:23:41 11 prohibits you from testifying or  
10:23:44 12 assisting in any way an athlete in  
10:23:47 13 connection with a doping offense even  
10:23:49 14 though that the test results may be  
10:23:51 15 invalid?

10:23:52 16 A. No. And that is absolutely  
10:23:53 17 a mischaracterization of what I said,  
10:23:56 18 what I write, and what my professional  
10:24:00 19 life is.

10:24:00 20 I have often in numerous  
10:24:05 21 instances reviewed documentation  
10:24:07 22 packages produced by -- by other labs  
10:24:12 23 in my capacity of IAAF scientific  
10:24:18 24 experts, and when I was not satisfied  
10:24:19 25 with the test results, when I thought

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10:24:21 2 that they were not good, which can  
10:24:23 3 happen, I have never recommended going  
10:24:27 4 ahead with those cases. And if you  
10:24:29 5 want I can send them -- I can talk  
10:24:32 6 about the many examples that can prove  
10:24:35 7 that I have assisted indirectly  
10:24:39 8 athletes in not being prosecuted, in  
10:24:45 9 absence of a better term, with -- on  
10:24:48 10 weak scientific grounds.

10:24:50 11 Q. So there are many instances  
10:24:54 12 which you have reviewed that  
10:24:55 13 laboratories have brought allegations  
10:24:57 14 based upon weak scientific grounds,  
10:25:00 15 correct?

10:25:00 16 A. The labs are not bringing  
10:25:02 17 allegations. The labs are reporting a  
10:25:06 18 result, and it is the role of the  
10:25:11 19 testing organization to review the data  
10:25:15 20 and see whether all is correct.

10:25:17 21 So yes, in several instances  
10:25:20 22 I have not recommended going further on  
10:25:24 23 the basis of the lab -- what the lab  
10:25:27 24 had reported, or I have not recommended  
10:25:30 25 bringing a case which had on first

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10:25:34 2 instance been not viewed as a doping  
10:25:38 3 violation by the first tribunal. I  
10:25:41 4 would have recommended to not proceed  
10:25:43 5 further.

10:25:43 6 So this happened.

10:25:45 7 Q. Because those laboratory  
10:25:47 8 results or laboratory test findings  
10:25:50 9 were inaccurate or unreliable, correct?

10:25:53 10 A. Yes, because on the balance  
10:25:58 11 there were mistakes that were done or  
10:26:00 12 that it was not acquired on the most  
10:26:04 13 perfect way, yes.

10:26:05 14 Q. And these were from WADA  
10:26:06 15 accredited labs, right?

10:26:08 16 A. These would have been from  
10:26:09 17 WADA accredited labs.

10:26:11 18 Q. So you would agree with me  
10:26:12 19 that the simple fact of a WADA  
10:26:15 20 accreditation is not an assurance that  
10:26:17 21 everything within that lab is done  
10:26:18 22 properly, correct?

10:26:19 23 A. Absolutely, it can happen.  
10:26:22 24 Mistakes can happen.

10:26:25 25 Q. You indicated that in your

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10:26:26 2 witness statement that you've been a  
10:26:28 3 panel appointed expert, correct?

10:26:30 4 A. Yes.

10:26:31 5 Q. And a panel appointed expert  
10:26:32 6 in a proceeding similar to this one,  
10:26:34 7 correct?

10:26:34 8 A. Yes.

10:26:34 9 Q. As a panel appointed expert  
10:26:38 10 has an athlete ever been found not  
10:26:41 11 guilty of an anti-doping violation?

10:26:44 12 A. In panels --

10:26:46 13 Q. In a case in which you were  
10:26:48 14 serving as the panel appointed expert?

10:26:50 15 A. It happened once and the  
10:26:52 16 athlete was convicted of a doping  
10:26:54 17 violation.

10:26:55 18 Q. Just so that the record is  
10:26:58 19 clear, when you say it happened once,  
10:26:59 20 it means you participated as a panel  
10:27:02 21 expert once and the athlete was  
10:27:05 22 convicted of a doping violation?

10:27:06 23 A. Yes.

10:27:06 24 Q. Have you ever testified in  
10:27:07 25 favor of an athlete in any capacity?

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10:27:10 2 A. Testified as such, no. But  
10:27:13 3 I would have provided statement  
10:27:16 4 contradicting -- yes, I would have  
10:27:18 5 provided statement, but I would not  
10:27:20 6 have testified in favor, yes.

10:27:23 7 Q. When you say a statement,  
10:27:24 8 what do you mean?

10:27:25 9 A. I mean some reports would  
10:27:28 10 have been filed, but in prior  
10:27:31 11 instances, not when the cases are due  
10:27:35 12 to arbitration.

10:27:39 13 Q. So it wasn't testimony,  
10:27:40 14 correct?

10:27:40 15 A. It wasn't testimony, no.

10:27:42 16 Q. Have you ever publicly  
10:27:43 17 challenged a position by WADA?

10:27:45 18 A. Oh, yes, yes, I did.

10:27:46 19 Q. And can you tell me what  
10:27:47 20 those instances were?

10:27:48 21 A. Well, one very famous one  
10:27:56 22 would be -- there was a series of  
10:27:59 23 positive findings afflicting professional  
10:28:03 24 tennis player at the Association of  
10:28:06 25 Tennis Professionals, ATP, and those were

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10:28:09 2 analyzed and reported by my lab on first  
10:28:13 3 instance. When the cases were reviewed  
10:28:18 4 and pushed forward -- brought forward --  
10:28:21 5 again, be patient with -- I'm not fluent  
10:28:24 6 -- I'm fluent in English, but I may use  
10:28:28 7 sometimes the really not accurate words,  
10:28:30 8 so be patient with me. In the course of  
10:28:33 9 the investigations and B sample analysis  
10:28:35 10 it became obvious to me that all the  
10:28:37 11 profiles were the same, and that was  
10:28:40 12 awkward.

10:28:41 13 And I wrote immediately a  
10:28:43 14 letter when I noticed it to ATP and to  
10:28:47 15 the person in charge of reviewing all  
10:28:53 16 those cases and I told them in my  
10:28:59 17 opinion it was not ethical or it did  
10:29:01 18 not make sense to continue prosecuting  
10:29:04 19 those cases. And we had to look at  
10:29:06 20 them altogether.

10:29:10 21 So -- and when those  
10:29:12 22 athletes got exonerated by the ATP  
10:29:16 23 tribunal, the WADA launched an  
10:29:20 24 investigation and asked for an  
10:29:26 25 explanation why those athletes had not



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10:29:28 2 been prosecuted. And I have explained  
10:29:33 3 what was my point and WADA was not  
10:29:35 4 happy and they issued a report saying  
10:29:37 5 that I have I think over -- I went over  
10:29:43 6 my capacity and responsibility of lab  
10:29:45 7 directors and that it was not right.

10:29:48 8 And actually, that, with  
10:29:50 9 that we stood strong by our position  
10:29:54 10 and I contradicted WADA clearly on that  
10:29:57 11 point and those were not doping  
10:29:59 12 offenses. As a matter of fact, this  
10:30:01 13 was active urine. So on that instance  
10:30:03 14 I have challenged WADA.

10:30:05 15 You can also find numerous  
10:30:08 16 instances where, for example, in the  
10:30:10 17 treatment of the, what has become the  
10:30:16 18 Lance Armstrong episode where the lab  
10:30:19 19 in Paris, where some results have  
10:30:22 20 leaked in the press, where I have  
10:30:24 21 directly contradicted WADA's chairman,  
10:30:27 22 Mr. Richard Pound's statement with  
10:30:30 23 regard to the treatment of the Lance  
10:30:32 24 Armstrong samples. So I went public, I  
10:30:34 25 went on public on record.

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10:30:35 2 I am frequently writing  
10:30:38 3 letters to WADA saying that I disagree  
10:30:39 4 with their position particularly, and I  
10:30:44 5 could go on for an hour, but this is  
10:30:45 6 not the point, but particularly with  
10:30:47 7 their position with the GH testing.  
10:30:49 8 I've contradicted them publicly as  
10:30:52 9 there are no currently no tests  
10:30:54 10 available for GH to be pushed over a  
10:30:57 11 North American professional sports.

10:31:00 12 Do you want me to continue?

10:31:01 13 Q. You actually have the ATP  
10:31:03 14 business to do their testing, correct?

10:31:04 15 A. ATP is not at all anymore  
10:31:10 16 doing business.

10:31:10 17 Q. With your laboratory?

10:31:11 18 A. No, they're not doing  
10:31:13 19 testing anymore.

10:31:13 20 Q. At one time you did have  
10:31:15 21 ATP's testing?

10:31:16 22 A. At that time I was doing ATP  
10:31:18 23 testing, yes.

10:31:19 24 Q. And you were being paid for  
10:31:20 25 it, correct?

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10:31:21 2 A. I was being paid for it. My  
10:31:25 3 lab was being paid for the testing.

10:31:27 4 Q. Your lab was being paid for  
10:31:29 5 it. At the time, what percentage of  
10:31:31 6 your laboratory's business was the  
10:31:33 7 ATP's business?

10:31:36 8 A. It's tough for me to say.  
10:31:40 9 We are doing more than -- at that time  
10:31:42 10 we must have been doing 10,000, 8,000  
10:31:45 11 tests per year. We are now doing  
10:31:48 12 15,000 tests per year. ATP or  
10:31:50 13 professional tennis samples would be  
10:31:54 14 something, 200, 300 samples per year.  
10:31:57 15 And it's again, I don't want -- this is  
10:32:00 16 an estimation. I may be wrong.

10:32:03 17 Q. Now of course, you're not  
10:32:11 18 the laboratory director of LNDD?

10:32:13 19 A. I'm not the lab director at  
10:32:15 20 LNDD.

10:32:15 21 Q. And you didn't perform any  
10:32:16 22 of the tests in question here, correct?

10:32:19 23 A. Correct.

10:32:20 24 Q. And in fact you didn't  
10:32:21 25 observe any of the tests in question

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10:32:23 2 here, correct?

10:32:23 3 A. Correct.

10:32:25 4 Q. And you don't have an  
10:32:27 5 IsoPrime instrument in your laboratory  
10:32:29 6 running on OS/2 1.67 software, do you?

10:32:34 7 A. No, we don't.

10:32:35 8 Q. Have you ever used the  
10:32:36 9 IsoPrime JA instrument running the OS/2  
10:32:41 10 software?

10:32:41 11 A. No, never.

10:32:43 12 Q. With respect to your witness  
10:33:00 13 statement on paragraph 2 where you  
10:33:04 14 calculate the percentages of your  
10:33:06 15 business on a yearly basis, when you  
10:33:14 16 add up the percentages they don't --  
10:33:20 17 they don't add up to a hundred percent.

10:33:24 18 A. Yes.

10:33:25 19 Q. Can you tell me what the  
10:33:26 20 balance of the testing is?

10:33:28 21 A. I knew I would have had to  
10:33:30 22 go further and that you would have  
10:33:32 23 asked me that question. It's basically  
10:33:36 24 testing that could be done for power --  
10:33:43 25 power lifting would be an example.

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10:33:45 2 It's a non-IOC sport and they don't  
10:33:49 3 have -- it's not a WADA signatory, or  
10:33:51 4 maybe it is, but I don't know. It  
10:33:57 5 could be bodybuilding, it could be  
10:33:59 6 schools, colleges, university testing.  
10:34:12 7 It could be international testing. It  
10:34:15 8 is international testing. Could be for  
10:34:16 9 a foreign country.

10:34:17 10 So I cannot go in more  
10:34:19 11 details.

10:34:20 12 Q. You're not sure basically?

10:34:22 13 A. I'm not sure. I just focus  
10:34:24 14 on the Canadian program and the North  
10:34:29 15 American professional sport  
10:34:31 16 organizations.

10:34:32 17 Q. Now, in your lab do you test  
10:34:33 18 for the presence of exogenous  
10:34:37 19 testosterone?

10:34:38 20 A. We test for the -- for the  
10:34:43 21 detection and confirmation of natural,  
10:34:49 22 quote, unquote, endogenous, potentially  
10:34:52 23 endogenous steroids such as  
10:34:55 24 testosterone.

10:34:55 25 Q. As part of that testing you

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10:34:57 2 use carbon isotope ratio testing

10:35:00 3 method, correct?

10:35:00 4 A. Yes, we do.

10:35:02 5 Q. And it consists of a

10:35:05 6 GC/C/IRMS instrument, correct?

10:35:07 7 A. Yes.

10:35:07 8 Q. And you also use a separate

10:35:08 9 GC/MS instrument, correct?

10:35:11 10 A. Yes.

10:35:12 11 Q. And in your laboratory when

10:35:17 12 you identify the testosterone

10:35:19 13 metabolites you do so by comparing the

10:35:21 14 relative retention time or retention

10:35:23 15 time between your GC/MS instrument and

10:35:25 16 your GC/C/IRMS instrument, correct?

10:35:27 17 A. Well, if this is a bit --

10:35:31 18 this is a bit -- this is summarized

10:35:34 19 quite rapidly. We would -- we are

10:35:44 20 doing the measurement of the delta

10:35:46 21 carbon 13 values with the IRMS

10:35:48 22 instrument and we are identifying the

10:35:52 23 steroids that were analyzed, the same

10:35:55 24 fractions that were analyzed by

10:36:00 25 GC/C/IRMS on GC/MS.

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10:36:02 2 Q. Right. So just to be  
10:36:04 3 perfectly clear, in your laboratory you  
10:36:07 4 do use retention time analysis to  
10:36:10 5 compare between a separate GC/MS  
10:36:13 6 separate and a separate GC/C/IRMS  
10:36:16 7 instrument, correct?

10:36:17 8 A. It would be part of the  
10:36:20 9 overall test. We would prove -- and  
10:36:24 10 the purpose of the GC/MS is really to  
10:36:26 11 make sure that we are really having,  
10:36:29 12 let's say, androsterone in that  
10:36:33 13 fraction and that it is pure/ and we  
10:36:36 14 also do -- while we do the GC/C/IRMS,  
10:36:40 15 we have -- we identify -- let's say we  
10:36:46 16 match the retention time of the peaks  
10:36:48 17 that are eluted in the GC/C/IRMS  
10:36:51 18 chromatogram, we match them with  
10:36:53 19 reference material.

10:36:57 20 Q. Let me make sure that the  
10:36:59 21 panel is clear because you've used a  
10:37:00 22 lot of different concepts. Very  
10:37:05 23 simply, you have a GC/MS instrument,  
10:37:07 24 correct?

10:37:07 25 A. Yes.

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10:37:07 2 Q. It is separate from your  
10:37:09 3 GC/C/IRMS instrument, correct?

10:37:10 4 A. Absolutely.

10:37:11 5 Q. When you conduct your  
10:37:15 6 testosterone metabolite identification  
10:37:17 7 process you compare the retention time  
10:37:21 8 between the separate GC/MS instrument  
10:37:23 9 with the retention time of the separate  
10:37:24 10 GC/C/IRMS instrument, correct?

10:37:27 11 A. This is not -- well, we  
10:37:30 12 would -- we would compare the profiles  
10:37:38 13 obtained by the GC/MS and the  
10:37:41 14 GC/C/IRMS, but I'm telling you that the  
10:37:43 15 identification, let's say the  
10:37:46 16 correspondence of the retention times  
10:37:49 17 in the GC/C/IRMS are done in comparison  
10:37:55 18 with reference material.

10:37:56 19 Q. Let me ask you the same  
10:38:05 20 question in a different way. Are you  
10:38:06 21 denying that you use GC/MS retention  
10:38:09 22 time in your separate instrument  
10:38:11 23 against the retention time of your  
10:38:14 24 GC/C/IRMS instrument to identify  
10:38:17 25 testosterone metabolite? Are you



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10:38:18 2 denying you do that?

10:38:19 3 A. No. We are of course  
10:38:22 4 comparing profiles, but it would have  
10:38:24 5 -- we are not -- how can I say? I'm  
10:38:28 6 not so sure I understand very well your  
10:38:30 7 question. What I mean to say is that  
10:38:32 8 we can compare the retention time --  
10:38:34 9 the -- we will compare whether that  
10:38:37 10 makes sense, whether the profile makes  
10:38:39 11 sense, whether both are similar of  
10:38:43 12 course because they are on two  
10:38:44 13 different machines. So we do compare  
10:38:46 14 the retention times and we do make sure  
10:38:49 15 that the peaks eluting on the GC/C/IRMS  
10:38:55 16 is what has been identified by GC/MS.  
10:39:03 17 So we use the comparison of course.

10:39:05 18 Q. You compare the retention  
10:39:07 19 time of the GC/MS instrument of the  
10:39:09 20 testosterone metabolites against the  
10:39:10 21 retention time of your GC/C/IRMS  
10:39:13 22 instrument?

10:39:13 23 A. Well --

10:39:14 24 MR. YOUNG: Excuse me, I  
10:39:15 25 think the question has been asked and

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10:39:16 2 answered a lot of times.

10:39:19 3 MR. SUH: I disagree that

10:39:20 4 it's been answered a lot of time. It's

10:39:24 5 certainly been asked a lot of times.

10:39:25 6 Q. I can show you a doc pack

10:39:27 7 from your laboratory. Would you like

10:39:29 8 me to show you a doc pack?

10:39:31 9 A. Oh, yes, certainly.

10:39:36 10 MR. SUH: We would show her

10:39:37 11 now a doc pack from the Montreal

10:39:40 12 laboratory from a case that's been

10:39:42 13 redacted and we will provide one now to

10:39:44 14 opposing counsel. And also one for the

10:39:54 15 panel.

10:40:32 16 THE PRESIDENT: I take it

10:40:33 17 this is a document that isn't in the

10:40:35 18 exhibit list?

10:40:36 19 MR. SUH: That's correct.

10:40:39 20 MR. YOUNG: I still haven't

10:40:40 21 received a copy. I have no idea what

10:40:41 22 they're talking about.

10:40:42 23 MR. SUH: We'll provide a

10:40:43 24 copy. We can either hold this line of

10:40:45 25 questioning for later until we get a

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10:40:48 2 copy made right now or -- I thought  
10:40:51 3 that we had copies.

10:40:55 4 A. Okay.

10:40:58 5 THE PRESIDENT: I think we  
10:40:59 6 should adopt that approach, in other  
10:41:01 7 words, until Mr. Young sees it we  
10:41:04 8 shouldn't allow the question because  
10:41:07 9 although the witness doubtless can cope  
10:41:10 10 with the questions, we better just have  
10:41:13 11 him check first. So would you mind  
10:41:15 12 passing to another topic and we'll come  
10:41:17 13 back to it?

10:41:18 14 MR. SUH: Yes, no problem.

10:41:19 15 Q. Ms. Ayotte, you testified at  
10:41:22 16 the AAA hearing on direct examination  
10:41:24 17 that you were comfortable with the T/E  
10:41:27 18 confirmation values in the range of 11  
10:41:30 19 as corroborating evidence for the IRMS  
10:41:33 20 test results in this case?

10:41:35 21 A. Yes.

10:41:36 22 Q. And when you testified that  
10:41:38 23 you were comfortable about using it as  
10:41:44 24 corroborating evidence, you knew at  
10:41:50 25 that time that the T/E test had

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10:41:52 2 violated the SIM requirement in  
10:41:55 3 violation of the ISL, right?

10:41:58 4 A. Well, you call it a  
10:42:00 5 violation. I say that how the lab  
10:42:03 6 acquired it and what the lab decided to  
10:42:09 7 do in confirming that finding was not a  
10:42:16 8 -- the interpretation -- that their  
10:42:19 9 interpretation was not in line with  
10:42:21 10 what the ISL recommended. So I did not  
10:42:26 11 -- no, and I don't view this in my mind  
10:42:29 12 as a violation.

10:42:32 13 Q. You don't view in your mind  
10:42:34 14 the LNDD laboratory's failure to follow  
10:42:38 15 the single ion monitoring ISL, the SIM  
10:42:44 16 requirement in the ISL as an ISL  
10:42:46 17 violation?

10:42:50 18 A. I view it as not in line  
10:42:52 19 with what the ISL and the technical  
10:42:54 20 document is recommending. Actually,  
10:42:56 21 they did not produce, they did not  
10:42:59 22 produce the identification criteria of  
10:43:03 23 testosterone and that should have been  
10:43:05 24 produced.

10:43:06 25 Q. Your testimony suggests that

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10:43:08 2 they in fact did in fact properly  
10:43:13 3 perform the test?

10:43:14 4 A. No, this is not --

10:43:15 5 Q. And that they didn't produce  
10:43:17 6 the documents, is that --

10:43:18 7 A. No, this is not what I say. I  
10:43:20 8 don't know if -- well, let me backtrack.  
10:43:23 9 We don't have the identification of  
10:43:26 10 testosterone and that should have been  
10:43:28 11 provided. So in the end it's not only --  
10:43:32 12 and I readily pointed this when I was  
10:43:36 13 asked the question. In two ways they  
10:43:39 14 were not following what they should have  
10:43:43 15 been following. They did not provide the  
10:43:46 16 identification criteria for testosterone,  
10:43:48 17 and they did not quantify in triplicate.

10:43:57 18 Q. When you say quantify in  
10:44:01 19 triplicate, that means they didn't  
10:44:02 20 acquire three diagnostic ions with  
10:44:05 21 respect to the --

10:44:06 22 A. No, this is not what I'm  
10:44:07 23 saying. This is two different things.  
10:44:10 24 They should have, according to the  
10:44:11 25 document, they should have conducted

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10:44:13 2 the confirmation analysis of the T/E  
10:44:16 3 ratio in triplicate and they should  
10:44:18 4 have provided the identification of  
10:44:24 5 testosterone. So their interpretation  
10:44:25 6 of what the ISL is recommending to do  
10:44:30 7 in such case was -- was not what the  
10:44:35 8 ISL and the technical documents want to  
10:44:39 9 do. They are using IRMS as the sole  
10:44:41 10 confirmatory technique and that  
10:44:44 11 interpretation is not in line with the  
10:44:47 12 -- with the technical document.

10:44:49 13 Q. You're not suggesting that  
10:44:53 14 the ISL's rule on acquisition of free  
10:44:56 15 diagnostic ions is a recommendation?  
10:44:59 16 I've heard you say recommendation  
10:45:00 17 several times. It's the rule, right?

10:45:02 18 A. I will not challenge -- I  
10:45:04 19 don't want to challenge you on this,  
10:45:05 20 but I think in the documentation  
10:45:07 21 package I've seen the acquisition of  
10:45:09 22 the three ions. So they do not produce  
10:45:11 23 the identification, but in the  
10:45:13 24 documentation package you can see the  
10:45:15 25 acquisition of the three ions.

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10:45:17 2 Q. You're saying that in the  
10:45:19 3 documentation package with respect to  
10:45:20 4 the T/E test that they did in fact  
10:45:24 5 acquire three diagnostic ions?

10:45:26 6 A. That -- no. You asked me,  
10:45:28 7 your question, sir, was that they did  
10:45:30 8 not acquire the three ions. And I can  
10:45:34 9 see -- I could see in the documentation  
10:45:36 10 package that the ions were acquired.

10:45:38 11 Q. But they did not report  
10:45:39 12 them?

10:45:40 13 A. They did not report them.

10:45:41 14 Q. So you don't know what  
10:45:42 15 values the diagnostic ions were at if  
10:45:46 16 they didn't report them?

10:45:47 17 A. No, we don't know it.

10:45:48 18 Q. And that is a violation of  
10:45:50 19 the ISL?

10:45:50 20 A. Yes.

10:45:52 21 Q. And yet when you testified  
10:45:54 22 below you were perfectly comfortable  
10:45:56 23 relying on a technique you knew was in  
10:45:59 24 violation of the ISL to corroborate the  
10:46:01 25 finding against Appellant at the AAA

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10:46:05 2 proceeding?

10:46:05 3 A. At this -- and the -- had  
10:46:10 4 the finding been only composed of the  
10:46:13 5 T/E value it would have gone nowhere.

10:46:15 6 Q. No, my --

10:46:16 7 A. But had the finding -- what  
10:46:18 8 I testified, sir, you were talking  
10:46:20 9 about my testimony and what I testified  
10:46:21 10 was that I thought that the T/E ratio  
10:46:24 11 as estimated by the lab in Paris was  
10:46:28 12 fully consistent with what the IRMS  
10:46:31 13 confirmation wrote, yes.

10:46:36 14 MR. SUH: Todd, could you  
10:46:37 15 bring up Page 826, lines 11 through 14.

10:46:56 16 Q. Do you recognize this is  
10:46:58 17 your testimony from the AAA hearing  
10:47:00 18 below?

10:47:00 19 A. Yes.

10:47:01 20 Q. Now, earlier before we  
10:47:02 21 started talking about this subject you  
10:47:04 22 were talking about your objectivity  
10:47:10 23 with respect to scientific testing. Do  
10:47:12 24 you recall?

10:47:12 25 A. Yes.



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10:47:12 2 Q. Now when you testified that  
10:47:13 3 you are comfortable that the T/E test  
10:47:16 4 could be used as corroborating  
10:47:19 5 evidence, you knew at the time that  
10:47:20 6 this so-called corroborating evidence  
10:47:23 7 was in violation of the ISL, correct?

10:47:25 8 A. I knew that they had not  
10:47:27 9 followed the ISL and the technical  
10:47:30 10 document, yes, of course.

10:47:31 11 Q. And yet you were perfectly  
10:47:34 12 comfortable with relying on evidence or  
10:47:37 13 test results that was in violation of  
10:47:40 14 the ISL to establish an adverse  
10:47:42 15 analytic finding against Mr. Landis?

10:47:44 16 A. Yes, I thought it was  
10:47:46 17 coherent and that the T/E value of 11  
10:47:49 18 as measured by the lab --

10:47:51 19 Q. And this is notwithstanding  
10:47:52 20 the fact that even the AAA panel later  
10:47:54 21 below completely disregarded the T/E  
10:47:58 22 analysis?

10:47:59 23 A. Yes. And I think that my --  
10:48:02 24 my opinion, and I don't want to show  
10:48:05 25 any disrespect to the panel, is that it

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10:48:11 2 is -- I would still rely on the  
10:48:14 3 information provided by the T/E ratio  
10:48:16 4 as corroborating evidence.

10:48:19 5 MR. RIVKIN: Could I ask just  
10:48:20 6 to clarify, I'm not sure if it's a  
10:48:22 7 language issue or what, but I just want  
10:48:24 8 to make sure I understand because Mr. Suh  
10:48:27 9 in his questions talked about relying  
10:48:29 10 upon the T/E ratio to make a positive  
10:48:33 11 adverse analytical finding and you  
10:48:36 12 referred in your testimony here, at least  
10:48:39 13 the questions, about corroborating  
10:48:41 14 evidence and you just used that. So just  
10:48:43 15 so I'm clear, do you think that if we  
10:48:46 16 didn't have the IRMS result, the T/E  
10:48:49 17 result would be sufficient to make an  
10:48:51 18 adverse analytical finding?

10:48:53 19 THE WITNESS: No, no, no,  
10:48:54 20 not at all. Not at all.

10:48:56 21 MR. RIVKIN: So do I  
10:48:56 22 understand your testimony then to be that  
10:48:59 23 in light of the IRMS result you find the  
10:49:04 24 T/E ratio to be proper to rely upon as  
10:49:10 25 corroborating evidence to support an AAF

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10:49:13 2 but not stand by itself?

10:49:15 3 THE WITNESS: Absolutely.

10:49:21 4 MR. RIVKIN: I just wanted  
10:49:21 5 to make sure I understood what she was  
10:49:23 6 saying.

10:49:24 7 Q. And you still feel comfortable  
10:49:25 8 with that even though the AAA panel below  
10:49:30 9 rejected such a suggestion?

10:49:33 10 A. Yes. And for the reason  
10:49:36 11 that it is not because the lab did not  
10:49:39 12 provide the identification criteria  
10:49:42 13 that that peak is not that of  
10:49:45 14 testosterone.

10:49:50 15 Q. I'd like to turn your  
10:49:51 16 attention to Page 8, paragraph 19 of  
10:50:07 17 your witness statement.

10:50:10 18 MR. SUH: Todd, that's RD  
10:50:13 19 1.8.

10:50:13 20 Q. These are questions with  
10:50:15 21 respect to chain of custody. I'd in  
10:50:20 22 particular like to draw your attention  
10:50:22 23 to the line "I was able from the  
10:50:24 24 different documents provided by the  
10:50:25 25 laboratory to follow who had possession

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10:50:27 2 of the bottles and aliquots, or where  
10:50:30 3 they were stored, on which instrument  
10:50:32 4 they were being processed."

10:50:35 5 MR. SUH: Now, Todd if you  
10:50:37 6 could put up too on the screen before,  
10:50:43 7 if you could show Dr. Ayotte the pages  
10:50:48 8 1590 and 1591.

10:50:52 9 Q. Now, when you made the  
10:50:53 10 statement of course you didn't have  
10:50:54 11 access to any reply declarations from  
10:51:01 12 laboratory personnel, correct?

10:51:02 13 A. No.

10:51:02 14 Q. So what you had in front of  
10:51:04 15 you were these two documents?

10:51:05 16 A. Yes.

10:51:06 17 Q. And how did you, just by  
10:51:08 18 looking at these two different  
10:51:09 19 documents reconcile them given that one  
10:51:14 20 says that there's possession at 7:25  
10:51:17 21 and the other has possession at 7:30,  
10:51:21 22 removal from the refrigerator?

10:51:23 23 A. Well, the following way. I  
10:51:26 24 noticed of course that discrepancy in  
10:51:35 25 both forms, I noticed the difference in

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10:51:37 2 the information provided on the -- with  
10:51:48 3 regard to who took the bottle out of --  
10:51:51 4 actually, I cannot read very well there  
10:51:54 5 nor there.

10:51:57 6 MR. YOUNG: Dr. Ayotte, you  
10:51:58 7 can wait until you have the real  
10:52:00 8 documents in front of you if you like.

10:52:02 9 A. So I noticed that on Page --  
10:52:05 10 aha -- that on Page 1590 it was said  
10:52:10 11 that the flacon, the bottles were taken  
10:52:15 12 at 7:25 by operator LM. While on the  
10:52:23 13 next page it would be said that for the  
10:52:25 14 same day operator 42, who is another  
10:52:30 15 Martin, would have retrieved the bottle  
10:52:35 16 at 7:30 on the same day.

10:52:38 17 So when I looked at this I  
10:52:41 18 noticed the discrepancy, but actually,  
10:52:44 19 I was -- and I have asked for of course  
10:52:48 20 the clarification, and -- but also it  
10:52:52 21 became obvious that operator LM did the  
10:52:57 22 operation on Page 1590, that he was the  
10:53:01 23 one who took the sample out at 7:25,  
10:53:06 24 while on Page 1591 we have a record  
10:53:14 25 which is made obviously with the same

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10:53:19 2 handwriting from operator 19, who made  
10:53:25 3 the record for another operator,  
10:53:27 4 operator 42.

10:53:28 5 So I raised that issue, I  
10:53:30 6 asked for an answer, and before --  
10:53:34 7 before we came to last year the  
10:53:37 8 arbitration, I was told that operator  
10:53:40 9 19 thought that the first document had  
10:53:48 10 been -- the first -- thought the  
10:53:50 11 operation had been done by 42.

10:53:53 12 So there is a discrepancy, I  
10:53:56 13 fully support this, but I was able  
10:53:59 14 still to say -- I was still able to say  
10:54:01 15 that the flask has been taken out by  
10:54:04 16 LM.

10:54:05 17 Q. So just so I understand your  
10:54:07 18 testimony, before the last hearing you  
10:54:10 19 actually inquired about this  
10:54:11 20 discrepancy and that you were told then  
10:54:13 21 that basically 1590 was accurate and  
10:54:17 22 1591 was not accurate, correct?

10:54:19 23 A. With regard to the de  
10:54:26 24 stockage, yes.

10:54:27 25 Q. When you said in your

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10:54:28 2 declaration I was able from the  
10:54:30 3 different documents provided by the  
10:54:31 4 laboratory to follow possession, that's  
10:54:39 5 not accurate, is it?

10:54:40 6 A. It is accurate.

10:54:41 7 Q. You needed to have witness  
10:54:43 8 testimony or witness statements to  
10:54:44 9 resolve this discrepancy?

10:54:46 10 A. Yes.

10:54:48 11 Q. So you couldn't have done it  
10:54:50 12 just from the different documents,  
10:54:51 13 correct?

10:54:52 14 A. Well yes, I would have been  
10:54:55 15 able to do it to the exception, quite  
10:54:58 16 frankly, because it was obvious to me  
10:55:00 17 that the second record is not the one  
10:55:03 18 that was accurate. So I rely on the  
10:55:05 19 first one and I was happy with it.

10:55:07 20 Q. But how do you know that the  
10:55:09 21 1591 is not accurate and 1590 is  
10:55:12 22 accurate if someone doesn't tell you?

10:55:14 23 A. I just explained to you on  
10:55:15 24 what basis I thought so. Because at  
10:55:17 25 Page 1590 it is obvious that it's

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10:55:22 2 operator LM who made -- who made the  
10:55:25 3 entry of taking the bottles out at  
10:55:29 4 7:25. And it is obvious to me -- and  
10:55:35 5 also this is what LNDD does. In  
10:55:39 6 several of their forms they are  
10:55:40 7 reproducing on top an action that has  
10:55:42 8 been done by someone else. They would  
10:55:45 9 do it for pH measurement or for  
10:55:48 10 specific gravity measurement. So this  
10:55:51 11 is something that they have in several  
10:55:52 12 of their forms.

10:55:53 13 So here it came obvious to  
10:55:55 14 me that in the contradicting evidence  
10:56:00 15 had an explanation and I relied on the  
10:56:02 16 first one to know who took the sample  
10:56:07 17 out at 7:25 on the 21st.

10:56:10 18 Q. So it's your position that  
10:56:12 19 whomever -- whoever had written down --  
10:56:22 20 your explanation includes the fact that  
10:56:23 21 you understand that there's a standard  
10:56:25 22 practice within the laboratory of  
10:56:27 23 recording this top information, this  
10:56:31 24 information in the top line on 1591  
10:56:35 25 basically as a kind of summary, right?



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10:56:37 2 A. Yes, it is how I understood  
10:56:40 3 it at the time.

10:56:40 4 Q. So again, that is not an  
10:56:43 5 understanding that is written on the  
10:56:46 6 face of this document, correct?

10:56:48 7 A. I'm sorry?

10:56:50 8 Q. That understanding doesn't  
10:56:51 9 come from this document, does it?

10:56:53 10 A. It comes from comparing both  
10:56:56 11 documents. The one who did the  
10:57:01 12 operation is LM at 7:25.

10:57:10 13 Q. Let me turn your attention  
10:57:12 14 back to your declaration, Page 11,  
10:57:18 15 paragraph 24. Your testimony -- this  
10:57:32 16 paragraph is with respect to matrix  
10:57:34 17 interference and the violation of the  
10:57:35 18 ISL, correct?

10:57:36 19 A. Correct.

10:57:36 20 Q. And your testimony is that  
10:57:38 21 the ISL --

10:57:42 22 MR. SUH: In fact, Todd,  
10:57:43 23 when you have an opportunity could you  
10:57:44 24 bring section 5.4.4.1 and section  
10:57:53 25 5.4.4.2 up.

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10:57:56 2 Q. You've of course reviewed  
10:57:57 3 these two sections many times before,  
10:58:00 4 yes?

10:58:01 5 A. Yes. I would like to have  
10:58:02 6 the ISL, please. Yes.

10:58:34 7 Q. And can you point to the  
10:58:36 8 portion of the ISL here that you are  
10:58:40 9 quoting from? Is it 5.4.4.1 or  
10:58:46 10 5.4.4.2?

10:58:46 11 A. Okay, I'm referring to --

10:58:56 12 Q. I'm referring to where you  
10:58:58 13 say "The method developed must be  
10:59:00 14 specifically to avoid interference in  
10:59:02 15 the detection of prohibited  
10:59:04 16 substances."

10:59:06 17 A. To 4. -- to 5.4.4.2.1,  
10:59:17 18 bullet point 1, 2, 3, 4, 5. Under the  
10:59:26 19 section "Validation of methods," so the  
10:59:34 20 first quote is "The method should avoid  
10:59:39 21 interference in the detection of  
10:59:41 22 prohibited substances or their  
10:59:43 23 metabolites or markers by components of  
10:59:46 24 the sample matrix."

10:59:49 25 And I was also referring to

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10:59:51 2 the next section, 5.4.4.2.2 for  
11:00:00 3 validation of method in the  
11:00:02 4 confirmation of threshold substance  
11:00:05 5 which reads, "As the method must limit  
11:00:09 6 interference in the measurement of the  
11:00:11 7 amount of prohibited substances or  
11:00:13 8 their metabolites or markers by  
11:00:16 9 components of the sample matrix."

11:00:19 10 Q. So your testimony is that  
11:00:24 11 this ISL does not require a laboratory  
11:00:28 12 to limit matrix interference when they  
11:00:31 13 actually do testing, correct?

11:00:33 14 A. This is not what I'm saying.  
11:00:37 15 What I'm saying is that the standard is  
11:00:40 16 asking you to apply a method in your  
11:00:44 17 testing confirmation and to select a  
11:00:46 18 method that has no or that is developed  
11:00:53 19 in the way of avoiding or limiting  
11:00:55 20 interferences in the confirmation of  
11:00:57 21 prohibited substances.

11:00:59 22 Q. Right. But you go on to  
11:01:05 23 say, once that is done, since we are  
11:01:08 24 dealing with urine samples not control,  
11:01:12 25 interferences may show up in a given

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11:01:14 2 specimen and that does not constitute a  
11:01:16 3 violation of the ISL?

11:01:17 4 A. Absolutely.

11:01:18 5 Q. In other words, if an  
11:01:20 6 athlete's sample had -- let's just take  
11:01:22 7 a hypothetical, had substantial or  
11:01:25 8 overwhelming matrix interference, in  
11:01:27 9 your mind that would not violate the  
11:01:29 10 ISL, that would not violate this  
11:01:31 11 provision here?

11:01:31 12 A. It would not -- it would  
11:01:33 13 compromise, it would compromise the  
11:01:36 14 result and the accuracy of the result  
11:01:39 15 if there were interferences in the  
11:01:42 16 samples -- in the sample being  
11:01:46 17 analyzed, but that wouldn't be a  
11:01:52 18 violation, it would not be because the  
11:01:54 19 lab in its validation of its method had  
11:01:58 20 violated the standard because it would  
11:02:00 21 have developed a method that was so  
11:02:05 22 poor that it showed in -- that there  
11:02:07 23 were -- that they were not -- they did  
11:02:09 24 not even took into account that normal  
11:02:12 25 matrix interference could hindered

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11:02:14 2 their measurements.

11:02:17 3 Q. Let me take this one step at  
11:02:19 4 a time. First of all, it sounds to me  
11:02:21 5 that you would agree with me if there  
11:02:23 6 was a lot of matrix interference in a  
11:02:26 7 given chromatogram it would render the  
11:02:28 8 results unreliable, right?

11:02:30 9 A. Absolutely.

11:02:31 10 Q. And it sounds like you would  
11:02:32 11 also agree with me that the method, when  
11:02:35 12 validated, must show that there is --  
11:02:37 13 that the method limits that interference  
11:02:38 14 for the obvious reason that if it doesn't  
11:02:40 15 limit that interference you might achieve  
11:02:44 16 unreliable results, correct?

11:02:45 17 A. Absolutely.

11:02:47 18 Q. But you go on to say that  
11:02:49 19 once validated, that the underlying  
11:02:53 20 samples below in any given test can  
11:02:55 21 show whatever matrix interference  
11:02:59 22 arises and that does not violate the  
11:03:00 23 ISL. Am I mistaken?

11:03:02 24 A. Yes, you are  
11:03:03 25 mischaracterizing my -- what I read or

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11:03:07 2 what -- at least what I thought if my  
11:03:11 3 writing was not that accurate. What  
11:03:13 4 I'm telling you is that -- and it's not  
11:03:15 5 what I meant. So I agree with what you  
11:03:17 6 say. When we develop the method we  
11:03:19 7 have to make sure that it limits  
11:03:23 8 interferences.

11:03:24 9 So once it is validated,  
11:03:27 10 once it is under the scope of  
11:03:28 11 accreditation and proving -- proven as  
11:03:32 12 not creating interferences, it's not --  
11:03:35 13 I do not go on as saying that if all  
11:03:38 14 the time they have interferences it's  
11:03:40 15 not a violation. But what I was saying  
11:03:43 16 is that if on one specific moment in  
11:03:46 17 one specific sample, let's say one out  
11:03:49 18 of 500 they are having interferences,  
11:03:53 19 that would render the result  
11:03:56 20 unreliable, first, they would not  
11:03:59 21 report, they would not reach the  
11:04:01 22 criteria, but that does not constitute  
11:04:03 23 a violation because one sample out of  
11:04:06 24 500 are in one day having  
11:04:10 25 interferences.

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11:04:12 2 THE PRESIDENT: Mr. Suh,  
11:04:13 3 this might be an appropriate time for  
11:04:16 4 our morning break.

11:04:18 5 MR. SUH: Okay.

11:04:19 6 THE PRESIDENT: We'll take  
11:04:20 7 15 minutes now. I probably don't need  
11:04:28 8 to say this again, but I'll say it  
11:04:30 9 anyway, you understand you cannot  
11:04:32 10 discuss the case.

11:04:33 11 THE WITNESS: I will stay  
11:04:35 12 here.

11:04:36 13 THE PRESIDENT: Stay in your  
11:04:38 14 private zone there.

11:04:40 15 MR. YOUNG: For our scheduling  
11:04:41 16 purposes, what's our status on clock for  
11:04:44 17 the parties?

11:04:54 18 THE PRESIDENT: My colleagues  
11:04:55 19 say that we're off the clock in the sense  
11:04:57 20 that so long as we finish by one and we  
11:04:59 21 have the afternoon for the closings then  
11:05:01 22 we'll be okay. But that doesn't mean to  
11:05:05 23 say that you will be crowded out. We  
11:05:07 24 will protect your position.

11:05:11 25 MR. RIVKIN: In that regard,

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11:05:13 2 do you know how much longer you have on  
11:05:14 3 cross?

11:05:15 4 MR. SUH: I believe probably  
11:05:17 5 no more than 20, 25 minutes. We'll try  
11:05:19 6 to be judicious with our use of time.

11:05:21 7 MR. BARNETT: In that case,  
11:05:22 8 if we have a short redirect, will we do  
11:05:27 9 the first close before lunch? I guess  
11:05:29 10 my concern being that if we start one  
11:05:31 11 close at 2 o'clock, that's an hour with  
11:05:34 12 panel questioning and we start another  
11:05:36 13 close at 3:30, that's an hour with some  
11:05:38 14 panel questioning. I'm concerned about  
11:05:41 15 the deadline.

11:05:42 16 THE PRESIDENT: I think we'd  
11:05:53 17 like to start one before lunch, but  
11:05:55 18 we'll talk about it and come back to  
11:05:57 19 you.

11:05:58 20 (A recess was taken.)

11:26:10 21 THE PRESIDENT: Just on the  
11:26:18 22 program for the day, what we will be  
11:26:24 23 suggesting is that when we have  
11:26:28 24 finished with the last witness Mr. Suh  
11:26:32 25 would begin after a short break his



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11:26:34 2 closing. We will be taking lunch  
11:26:39 3 between 1 and 2:15. After lunch Mr.  
11:26:46 4 Suh would finish if he hasn't finished  
11:26:48 5 his one hour, and Mr. Young would come  
11:26:51 6 on for an hour. But we have decided  
11:26:54 7 that in return for his agreement to  
11:27:00 8 start before lunch and go first that we  
11:27:02 9 would reserve to Mr. Suh a brief 15  
11:27:07 10 minute reply at the end of the game, so  
11:27:10 11 to speak. Does that sound reasonable?

11:27:11 12 MR. SUH: It sounds very  
11:27:13 13 fair, thank you.

11:27:14 14 MR. YOUNG: It does.

11:27:15 15 THE PRESIDENT: Thank you.  
11:27:16 16 Please continue with the examination.

11:27:19 17 BY MR. SUH:

11:27:24 18 Q. I believe when we left off  
11:27:26 19 we were talking about the ISL, and  
11:27:30 20 again, we have it in front of us, and  
11:27:32 21 your statement about what the ISL  
11:27:34 22 requires with respect to matrix  
11:27:38 23 interference. So Dr. Ayotte, just so  
11:27:44 24 we're all clear about this, is it your  
11:27:49 25 testimony that once a method is

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11:27:54 2 validated, that even if there is matrix  
11:27:58 3 interference in an athlete's sample  
11:28:01 4 below, which as you're explained would  
11:28:04 5 cause the results to be unreliable,  
11:28:07 6 that it does not constitute an ISL  
11:28:09 7 violation?

11:28:10 8 A. It does not constitute an ISL  
11:28:12 9 violation if the lab does not report that  
11:28:19 10 result as an adverse analytical finding.  
11:28:22 11 There is no violation in not reporting an  
11:28:26 12 inaccurate result due to matrix  
11:28:30 13 interferences.

11:28:31 14 Q. But if the lab did report  
11:28:35 15 that finding it would constitute an ISL  
11:28:39 16 violation, correct?

11:28:41 17 A. If the lab reports an  
11:28:45 18 inaccurate result, yes, it will -- it  
11:28:47 19 would.

11:28:48 20 Q. So for the purpose of this  
11:29:00 21 discussion, you would then amend your  
11:29:11 22 paragraph in your declaration where it  
11:29:13 23 says "Once that is done, since we are  
11:29:15 24 dealing with urine samples not  
11:29:17 25 controlled, interferences may show up

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11:29:19 2 in a given specimen and that does not  
11:29:23 3 constitute a violation of the ISL"?

11:29:25 4 A. No, no.

11:29:25 5 Q. But as you've just  
11:29:27 6 explained, it would constitute a  
11:29:29 7 violation of the ISL if that finding,  
11:29:31 8 or if that interference showed up in a  
11:29:34 9 finding that was reported and used  
11:29:36 10 against an athlete?

11:29:38 11 A. If that finding was  
11:29:39 12 inaccurate, and I do not see  
11:29:41 13 interference in the measurement of the  
11:29:43 14 delta C 13 values of the fraction 3  
11:29:45 15 metabolites in sample 995474. So that  
11:29:48 16 is my statement and I stick with it.

11:29:52 17 Q. And again, you're really  
11:29:54 18 talking first about the ISL and  
11:29:56 19 secondly about sample 995474 and your  
11:30:00 20 opinions about that.

11:30:01 21 I just want to be clear that  
11:30:05 22 you would of course admit that there  
11:30:08 23 would be an ISL violation if matrix  
11:30:10 24 interference showed up in a specimen  
11:30:15 25 and that specimen was reported as an

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11:30:18 2 adverse analytic finding, yes?

11:30:21 3 A. No, this is not what I've  
11:30:23 4 said. What I said was that it would be  
11:30:27 5 a violation if there were inaccurate --  
11:30:32 6 if there was a result reported, an  
11:30:35 7 inaccurate result reported and if the  
11:30:40 8 -- whatever the reason might have been,  
11:30:43 9 if one reason would have been matrix  
11:30:46 10 interference causing an unreliable  
11:30:48 11 finding to be reported as an adverse  
11:30:52 12 analytical finding, then that would be  
11:30:56 13 in violation with the ISL.

11:30:58 14 Q. And in violation of the ISL  
11:31:01 15 provision set forth here at 5.4.4.2?

11:31:04 16 A. It general -- no, it would  
11:31:07 17 be more on the basis of providing an  
11:31:11 18 unaccurate -- inaccurate result.

11:31:12 19 Q. So your statement, your  
11:31:18 20 testimony is not that reporting a  
11:31:23 21 finding based upon matrix interference,  
11:31:25 22 or -- or that reporting a finding  
11:31:31 23 involving chromatograms that display  
11:31:33 24 matrix experience is in violation of  
11:31:35 25 the ISL, your testimony is really that

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11:31:39 2 if you report an inaccurate finding it  
11:31:42 3 is in violation of the ISL?

11:31:44 4 A. Yes.

11:31:46 5 Q. But you've testified before  
11:31:49 6 that if there is matrix interference it  
11:31:52 7 renders the results inaccurate and  
11:31:55 8 unreliable, right?

11:31:56 9 A. May not necessarily. If  
11:32:00 10 there are -- if there are matrix  
11:32:05 11 interferences somewhere in a region of  
11:32:10 12 the chromatogram that is not at all the  
11:32:14 13 region where the adverse finding has  
11:32:16 14 been tested, there is no problem.

11:32:24 15 Q. So in your view, you could  
11:32:26 16 report an adverse analytic finding --  
11:32:29 17 let me give you this hypothetical.

11:32:31 18 Let's say you have a sample  
11:32:35 19 A and B, fractions 1, 2 and 3 for each  
11:32:39 20 sample and blanks for each sample, and  
11:32:42 21 let's say there was bad chromatography  
11:32:45 22 to every sample and every blank except  
11:32:48 23 for the second half of the F3 samples.  
11:32:56 24 Would you find that that would be a  
11:32:57 25 violation of the ISL?

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11:33:00 2 A. First, we wouldn't be here  
11:33:02 3 today, and secondly, the -- well, there  
11:33:08 4 would have been a violation had the  
11:33:10 5 result been not accurate. I cannot say  
11:33:14 6 it differently.

11:33:17 7 Q. Let me ask you this  
11:33:23 8 question. You've said that, you just  
11:33:28 9 testified that just because there is  
11:33:31 10 some matrix interference that would  
11:33:33 11 cause significant -- well, let me ask  
11:33:35 12 you this first to be fair.

11:33:36 13 There's clearly some, in  
11:33:42 14 your mind, matrix interference that  
11:33:44 15 would cause a result to be inaccurate  
11:33:46 16 and unreliable and other matrix  
11:33:48 17 interferences that would not cause the  
11:33:49 18 result to be inaccurate and unreliable,  
11:33:51 19 correct?

11:33:52 20 A. Yes.

11:33:52 21 Q. Let's take that first  
11:33:55 22 category first, the matrix interference  
11:33:58 23 that would cause a result to be  
11:34:00 24 inaccurate and unreliable. Is it your  
11:34:03 25 testimony that if there was

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11:34:06 2 chromatography supporting an adverse  
11:34:09 3 analytic finding that was as follows:  
11:34:16 4 All of the F1, F2 samples, the entirety  
11:34:21 5 of the bad chromatography, all of the  
11:34:24 6 blanks, F1, F2, F3, bad chromatography,  
11:34:29 7 and the front half of your F3 sample A  
11:34:34 8 and B bad chromatography. It's just a  
11:34:36 9 hypothetical. Would you say that  
11:34:38 10 reporting an adverse analytic finding  
11:34:43 11 on that hypothetical would violate the  
11:34:45 12 ISL or would not violate the ISL?

11:34:49 13 A. It would not violate the ISL  
11:34:51 14 if the results reported were accurate.

11:34:56 15 Q. And would it cause you --  
11:35:04 16 would it give you any concern that an  
11:35:08 17 adverse analytic finding was reported  
11:35:11 18 on the hypothetical that we have just  
11:35:13 19 discussed?

11:35:14 20 A. We would look before -- no.  
11:35:17 21 The concern would be raised if in the  
11:35:20 22 controls that the lab performed, if in  
11:35:24 23 positive, negative control, if in the  
11:35:27 24 reference material used, if in the  
11:35:33 25 result of the sample itself, there was

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11:35:37 2 -- there were inconsistency, if there  
11:35:41 3 were signs that the results were not  
11:35:45 4 accurate and that was due to matrix  
11:35:47 5 interferences, then I would be  
11:35:51 6 concerned.

11:35:52 7 Q. Let me ask you now about  
11:35:53 8 sample 995474. In your next sentence  
11:35:58 9 you say "I do not see interference in  
11:36:00 10 the measurement of the delta 13 values  
11:36:02 11 of the fraction 3 metabolites in sample  
11:36:05 12 995474," right?

11:36:07 13 A. Right.

11:36:08 14 Q. Are you familiar with what  
11:36:09 15 is called a trennzal calculation?

11:36:14 16 A. A trennzal?

11:36:15 17 Q. Yes.

11:36:15 18 A. No.

11:36:16 19 Q. You don't know what a  
11:36:17 20 trennzal calculation is?

11:36:18 21 A. No.

11:36:41 22 Q. On Page 10 of your  
11:36:42 23 declaration -- let me turn your  
11:36:59 24 attention to paragraph 22, this is --  
11:37:05 25 I'm going to ask you about manual



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11:37:07 2 reprocessing, okay. That paragraph you  
11:37:11 3 say in the second sentence, "If that  
11:37:16 4 automatic process was incorrect, the  
11:37:18 5 analyst manually reprocesses peaks;  
11:37:20 6 that is not only acceptable but  
11:37:22 7 necessary." First of all, are you  
11:37:28 8 familiar with the way that the OS/2  
11:37:31 9 software works in manual integration?

11:37:34 10 A. No.

11:37:38 11 Q. And you yourself have never  
11:37:40 12 actually used the OS/2 software in an  
11:37:43 13 IsoPrime to manually integrate?

11:37:46 14 A. No.

11:37:47 15 Q. When you rendered this  
11:37:48 16 opinion, were you aware that -- well,  
11:37:51 17 let me ask you this. When you say that  
11:37:55 18 "if that automatic process was  
11:37:58 19 incorrect," what is your definition of  
11:37:59 20 incorrect?

11:38:00 21 A. Well, if the -- when we look  
11:38:05 22 at the -- when the person in charge,  
11:38:08 23 the professionals in charge of  
11:38:10 24 conducting the extraction of the data  
11:38:14 25 analysis, whatever the machine is,

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11:38:17 2 whatever -- when -- whether it is an  
11:38:20 3 IRMS instrument or a GC instrument or  
11:38:23 4 whatever instrument, they have to look  
11:38:26 5 at the results that were obtained by  
11:38:30 6 the automatic treatment by the  
11:38:36 7 software. And if they see that  
11:38:37 8 something is wrong, whether it is the  
11:38:40 9 selection of the baseline, whether it  
11:38:43 10 is the start and stop of peaks which is  
11:38:47 11 what we call integrating peaks, then  
11:38:52 12 they -- it would be a good practice to  
11:38:55 13 not let unaccurate -- inaccurate  
11:38:59 14 results selected by a machine go on.  
11:39:02 15 It's good practice to check and  
11:39:04 16 manually reprocess -- reprocess in the  
11:39:08 17 sense of adjust the parameters of -- of  
11:39:16 18 the integration, of the data and the  
11:39:20 19 report created.

11:39:22 20 Q. Now, you were in the room  
11:39:24 21 here when the LNDD lab technicians  
11:39:26 22 testified that poor chromatography is  
11:39:31 23 one of the factors that causes the need  
11:39:33 24 to conduct more manual integration?

11:39:36 25 A. Not necessarily, sir. I

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11:39:39 2 would not take this as a -- as a level  
11:39:46 3 1 absolute statement. Sometimes you  
11:39:49 4 have a -- and if I may, you may have to  
11:39:54 5 adjust a start and stop of a peak even  
11:39:57 6 if you are having a single peak in a  
11:40:00 7 pure solvent. That may happen because  
11:40:04 8 softwares make -- may make some  
11:40:06 9 mistakes sometimes.

11:40:07 10 Q. My question was a little bit  
11:40:09 11 different. I'm not talking on a  
11:40:10 12 theoretical level. I was asking  
11:40:12 13 whether or not you heard the LNDD  
11:40:14 14 technicians in this case explain that  
11:40:17 15 at LNDD that they use manual  
11:40:19 16 integration to resolve problems with  
11:40:22 17 poor chromatography?

11:40:23 18 A. This is not what I -- I have  
11:40:25 19 no -- this was not my understanding of  
11:40:28 20 their testimony.

11:40:31 21 Q. Would you agree that poor  
11:40:34 22 chromatography is certainly one of the  
11:40:38 23 factors which causes the need to  
11:40:41 24 manually integrate peaks?

11:40:43 25 A. Poor chromatography, you are

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11:40:50 2 -- one fact -- well, let me explain  
11:40:53 3 this differently. Yes, poor  
11:40:55 4 chromatography can create a problem,  
11:40:58 5 but sometimes you may have to make  
11:41:00 6 adjustment and while the chromatography  
11:41:04 7 is good. So what I'm trying to nuance  
11:41:07 8 -- to bring a nuance here is to the  
11:41:10 9 point that you do not have to correct  
11:41:15 10 poor chromatography by doing manual  
11:41:17 11 checkups on a peak. That is something  
11:41:20 12 that happen even if the chromatography,  
11:41:25 13 if there is no other peaks or if you  
11:41:28 14 have a single peak in a chromatogram.  
11:41:31 15 So it's not a correction to a bad  
11:41:34 16 process. It is a correction to a  
11:41:36 17 decision of the computer.

11:41:39 18 Q. You would agree that the  
11:41:43 19 chromatogram is a representation of raw  
11:41:47 20 data coming off either the, in the IRMS  
11:41:51 21 instance the mass spectrometer or on  
11:41:54 22 the GC/MS instance the ion detector,  
11:41:58 23 correct?

11:41:58 24 A. Yes.

11:41:58 25 Q. And you would also agree

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11:42:00 2 that when you have peaks that are  
11:42:07 3 co-eluting or overlapping, that that is  
11:42:09 4 -- those are reasons why you would need  
11:42:11 5 to manually integrate, correct?

11:42:13 6 A. One of the reason, yes.

11:42:16 7 Q. Does it cause you any  
11:42:18 8 concern that in this case the LNDD  
11:42:21 9 technicians explained that they had to  
11:42:23 10 manually integrate almost all of the  
11:42:26 11 peaks in the sample?

11:42:27 12 A. No, and I just I think  
11:42:32 13 explained the reason why.

11:42:33 14 Q. What is the reason that that  
11:42:38 15 does not cause you any concern?

11:42:40 16 A. Because, as I said, and  
11:42:41 17 again, I don't know the specifics of  
11:42:48 18 their software and how frequently the  
11:42:51 19 software seems to be misplacing the  
11:42:55 20 start and stops of peaks. But it may  
11:43:01 21 have been softwares are taking  
11:43:03 22 decisions -- are taking decision as if  
11:43:04 23 they were thinking, this is not what I  
11:43:06 24 mean, but the software will operate  
11:43:12 25 upon some sets of parameters on the

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11:43:16 2 chromatogram and some software requires  
11:43:19 3 more manual intervention than others.

11:43:23 4 So the goal is not -- the  
11:43:25 5 goal is to correct an automatic  
11:43:29 6 decision that is incorrect.

11:43:31 7 So it does not concern me at  
11:43:33 8 all that they had to manually correct  
11:43:37 9 the start and stop of peaks. That just  
11:43:40 10 proved, on the contrary, that they  
11:43:43 11 really took great care in ensuring that  
11:43:48 12 the results that was produced was  
11:43:51 13 accurate.

11:43:51 14 Q. So your testimony is that  
11:43:55 15 the fact that they manually integrate  
11:43:58 16 peaks on a regular basis and manually  
11:44:01 17 integrate peaks -- peaks in this  
11:44:05 18 sample, that that doesn't cause you any  
11:44:09 19 concern at all about the underlying  
11:44:11 20 chromatography?

11:44:11 21 A. Absolutely not. Absolutely  
11:44:14 22 not.

11:44:25 23 MR. RIVKIN: Does your lab  
11:44:26 24 use manual integration?

11:44:27 25 THE WITNESS: Yes, we do.

1 CHRISTIANE AYOTTE- CROSS

11:44:31 2 MR. RIVKIN: Even on sample  
11:44:35 3 runs, Mix Cal Acetate and the like?

11:44:38 4 THE WITNESS: Yes. And the  
11:44:41 5 -- some softwares requires less  
11:44:45 6 intervention. Softwares. You know,  
11:44:50 7 the setup and the software is one part  
11:44:53 8 of this. We are not changing the value  
11:44:56 9 automatically acquired just for the fun  
11:44:58 10 of it. If we see that something is not  
11:45:01 11 accurate, then we would change the --  
11:45:05 12 change the start and stop. And we do  
11:45:07 13 it regularly. I must say that our lab  
11:45:13 14 personnel is instructed to check the  
11:45:16 15 result produced by the instrument and  
11:45:18 16 to -- and to make it accurate by  
11:45:24 17 whatever changing start and stop of  
11:45:28 18 peak, they will be instructed to do so.

11:45:31 19 So some software, some  
11:45:34 20 setups may require more intervention  
11:45:37 21 than others, but it does not concern me  
11:45:39 22 at all, and we do the same.

11:45:46 23 Q. But you of course don't use  
11:45:48 24 the same computer software processes to  
11:45:51 25 reintegrate?

1 CHRISTIANE AYOTTE- CROSS

11:45:51 2 A. No, because we do not have  
11:45:53 3 the Micromass.

11:45:54 4 Q. And it wouldn't cause you  
11:45:57 5 any concern at all that manual  
11:45:59 6 integration was happening on a  
11:46:01 7 consistent basis with respect to your  
11:46:04 8 chromatography?

11:46:04 9 A. Not at all.

11:46:06 10 Q. If you saw areas of poor  
11:46:08 11 chromatography in a chromatogram or  
11:46:11 12 series of chromatograms and also you  
11:46:13 13 knew that manual integration was  
11:46:15 14 occurring on a regular basis, that  
11:46:17 15 wouldn't cause you any concern either?

11:46:19 16 A. Manual integration is not a  
11:46:23 17 symptom of bad lab processing or bad  
11:46:27 18 chromatography. So this is my  
11:46:29 19 testimony.

11:46:29 20 Now, if I see interference,  
11:46:37 21 co-eluting peaks, overlapping peaks in  
11:46:39 22 a region -- in the region of the  
11:46:42 23 chromatogram or interfering with the  
11:46:44 24 measure of the analytes, yes, I'd be  
11:46:47 25 concerned. But not because there is



1 CHRISTIANE AYOTTE- CROSS

11:46:49 2 manual integration. But because there  
11:46:52 3 are reasons and interferences.

11:46:55 4 So don't -- don't have me to  
11:46:58 5 say that manual integration is a sign  
11:47:02 6 that cause me worry. It is not.

11:47:05 7 Q. And again, that wasn't my  
11:47:06 8 question. My question was actually far  
11:47:08 9 more specific.

11:47:09 10 MR. SUH: And if I could ask  
11:47:10 11 the reporter to read back the question.

11:47:12 12 (Record read as requested.)

11:47:27 13 A. And I give you the same  
11:47:29 14 answer. Because this is how I  
11:47:32 15 understood your question. There was  
11:47:33 16 two component -- there were two  
11:47:36 17 components in your question, manual  
11:47:38 18 integration on a regular basis as a  
11:47:41 19 source of concern, plus chromatography  
11:47:46 20 problems in the chromatography. So  
11:47:49 21 your question is having both together.

11:47:51 22 Q. In the same sample?

11:47:53 23 A. Yes. And I'm telling you  
11:47:54 24 that leave the manual integration on  
11:47:57 25 the side because for me it is not a

1 CHRISTIANE AYOTTE- CROSS

11:48:00 2 criteria of a problem. So I'm just  
11:48:05 3 having your question limited to if  
11:48:06 4 there are, if there were matrix and  
11:48:10 5 peaks interfering with the measurement  
11:48:13 6 of the analyte, whether it was done  
11:48:15 7 with manual or automatic process, yes,  
11:48:18 8 I would have a concern.

11:48:27 9 Q. I'd like to turn your  
11:48:28 10 attention to this doc pack. I think we  
11:48:34 11 now have copies for everyone.

11:48:41 12 THE PRESIDENT: We have a  
11:48:42 13 copy. Do you have a copy, Mr. Young?

11:48:45 14 MR. YOUNG: I do.

11:48:45 15 Q. Do you recognize this  
11:48:47 16 documentation package as a redacted doc  
11:48:51 17 pack for the test of exogenous  
11:48:55 18 testosterone -- excuse me, nandrolone  
11:48:57 19 from your laboratory?

11:48:59 20 A. That is -- I'm sorry, I must  
11:49:01 21 admit to not having looked at it since  
11:49:04 22 you gave it to me, but I think I  
11:49:06 23 remember what it is. It is an adverse  
11:49:12 24 finding reported for 19 norandrosterone  
11:49:21 25 at a level of 2.9 nanogram per ml on

1 CHRISTIANE AYOTTE- CROSS

11:49:25 2 which the GC/C/IRMS analysis was done  
11:49:29 3 to indicate the exogenous origin of  
11:49:31 4 that metabolite. So it's not related  
11:49:34 5 to testo, it's related to nandrolone.

11:49:37 6 Q. That was my question,  
11:49:39 7 nandrolone. If you could turn to the  
11:49:41 8 index of this document, do you see that  
11:49:42 9 there is -- they're not numbered, but  
11:49:46 10 it says table of contents and then  
11:49:48 11 there's a first section verification of  
11:49:51 12 the sample and there's a section below  
11:49:54 13 that that says confirmation analysis,  
11:49:56 14 identification and quantification? Do  
11:49:57 15 you see that?

11:49:57 16 A. Yes.

11:49:59 17 THE PRESIDENT: Just before  
11:50:00 18 we proceed, Mr. Young, having seen  
11:50:02 19 this, do you have any objection to this  
11:50:04 20 being received as an exhibit?

11:50:07 21 MR. YOUNG: Can we tell  
11:50:08 22 where this came from?

11:50:13 23 THE PRESIDENT: I think it's  
11:50:14 24 been redacted so that we can't, but it  
11:50:17 25 does seem to be accepted by the

1 CHRISTIANE AYOTTE- CROSS

11:50:19 2 professor as something from her  
11:50:22 3 laboratory. And as I understand it,  
11:50:29 4 it's being used not because of the  
11:50:31 5 specific results or anything of that  
11:50:33 6 sort, but as to the structure of the  
11:50:35 7 documentation packages.

11:50:37 8 MR. YOUNG: If its only  
11:50:41 9 purpose is for impeachment, then we  
11:50:44 10 have no objection. Obviously if it is  
11:50:47 11 offered for a purpose beyond that, we  
11:50:49 12 would.

11:50:51 13 THE PRESIDENT: Mr. Suh.

11:50:53 14 MR. SUH: It was originally  
11:50:55 15 offered for impeachment, but frankly,  
11:50:57 16 to the extent that she has failed to  
11:50:59 17 make clear that her laboratory uses  
11:51:02 18 GC/MS and GC/C/IRMS relative retention  
11:51:05 19 time analysis, we would admit it for  
11:51:08 20 that purpose also.

11:51:09 21 THE PRESIDENT: That seems  
11:51:10 22 to be impeachment anyway. The reason  
11:51:12 23 I've intervened, I just want to be  
11:51:14 24 clear about the status of this. Based  
11:51:16 25 on what we've heard we will admit it

1 CHRISTIANE AYOTTE- CROSS

11:51:18 2 and give it some description so we know  
11:51:21 3 what it is being referred to in the  
11:51:23 4 transcript. So we'll call it Montreal  
11:51:27 5 document package special  
11:51:37 6 identification. It will be Ayotte  
11:51:39 7 number 1.

11:51:39 8 (Ayotte Exhibit 1  
11:51:26 9 received in evidence, Montreal document  
11:51:27 10 package special identification.)

11:51:41 11 Q. If you look at the first  
11:51:45 12 section below verification it says  
11:51:47 13 "Identification, quantification?

11:51:49 14 A. Yes.

11:51:50 15 Q. And it says underneath that  
11:51:54 16 GC/MS analysis, do you see that?

11:51:55 17 A. Yes.

11:51:55 18 Q. And then below that it says  
11:51:58 19 GC/C/IRMS analysis?

11:51:59 20 A. Yes.

11:52:00 21 Q. And it has your standards  
11:52:02 22 and sets forth below it pregnanediol in  
11:52:14 23 standards on the second page, the page  
11:52:17 24 little Roman iii, and below that  
11:52:23 25 etiocholanolone and androsterone?

1 CHRISTIANE AYOTTE- CROSS

11:52:25 2 A. Yes.

11:52:26 3 Q. Do you see that?

11:52:26 4 A. Yes.

11:52:27 5 Q. So your laboratory tests for

11:52:31 6 the target testosterone metabolites,

11:52:35 7 etio and andro?

11:52:37 8 A. No, no, no, no. Let's

11:52:39 9 clarify a couple of issues. The first

11:52:49 10 -- to me that's important. The first

11:52:51 11 section that you referred me to, it is

11:52:52 12 nandrolone case so we have to do two

11:52:56 13 things. We have to identify the

11:52:58 14 metabolite of 19 -- the metabolite 19

11:53:03 15 norandrosterone and to quantify it. So

11:53:05 16 we have to say this is -- we have

11:53:07 17 proven the identify of 19

11:53:11 18 norandrosterone in the sample and we

11:53:13 19 have confirmed it's at a level of 2.9

11:53:16 20 nanogram per ml. The second step is to

11:53:20 21 show that the 19 norandrosterone that

11:53:25 22 was present in the athlete's sample is

11:53:27 23 not of endogenous origin, that it is

11:53:31 24 not produced by what we have described

11:53:33 25 as activity, quote, unquote.

1 CHRISTIANE AYOTTE- CROSS

11:53:36 2 So in the way that we  
11:53:39 3 designed that IRMS test is to purify  
11:53:44 4 the norandrosterone -- and let me --  
11:53:49 5 let me go a step back. If the  
11:53:57 6 norandrosterone is produced by the  
11:53:58 7 body, it will show the same isotopic  
11:54:01 8 value than androsterone from which it  
11:54:04 9 is supposed to come from. If 19  
11:54:12 10 norandrosterone is coming from  
11:54:16 11 application of a prohibited substance,  
11:54:19 12 its isotopic signature will differ from  
11:54:23 13 androsterone and that is why in the way  
11:54:26 14 that we have designed that test we are  
11:54:29 15 putting a test, we are measuring the  
11:54:33 16 delta values of 19 norandrosterone, but  
11:54:37 17 also of androsterone and pregnanediols,  
11:54:42 18 other metabolites to compare their  
11:54:47 19 delta values with that of 19  
11:54:50 20 norandrosterone.

11:54:52 21 So the purpose of that test  
11:54:53 22 is not to measure testosterone  
11:54:55 23 metabolite, but to obtain a delta value  
11:55:05 24 of the related steroids to compare it.

11:55:07 25 So androsterone and

1 CHRISTIANE AYOTTE- CROSS

11:55:09 2 etiocholanolone are there as a  
11:55:11 3 reference endogenous substance.

11:55:14 4 Q. I'd like you to turn your  
11:55:16 5 attention to Page 49. And do you  
11:55:34 6 recognize Page 49 and the GC/MS run?

11:55:37 7 A. No.

11:55:37 8 Q. Excuse me, the IRMS run.

11:55:39 9 A. It's the GC/C/IRMS of -- let  
11:55:43 10 me check so that I'm -- of sample 6890  
11:55:48 11 which is, I hope, the sample, the  
11:55:51 12 adverse sample, yes.

11:55:57 13 Q. Then turn your attention to  
11:55:59 14 Page 63. Do you recognize that as the  
11:56:06 15 GC/MS run?

11:56:09 16 A. Yes.

11:56:09 17 Q. Of the same sample?

11:56:10 18 A. Of the same fraction.

11:56:12 19 Q. Excuse me, same fraction.

11:56:13 20 A. Yes.

11:56:14 21 Q. And --

11:56:15 22 A. But it's difficult to me  
11:56:16 23 because I don't see the header. It has  
11:56:19 24 been redacted. I don't have the name,  
11:56:21 25 the file name, so --



1 CHRISTIANE AYOTTE- CROSS

11:56:29 2 MR. BARNETT: Is there a  
11:56:30 3 reason the file name's been redacted?

11:56:32 4 MR. SUH: We have redacted  
11:56:34 5 the file names to ensure that there is  
11:56:36 6 no identification information.

11:56:37 7 A. It's a lab code.

11:56:39 8 Q. Can you --

11:56:40 9 A. But I will -- let me just  
11:56:42 10 look at the table of contents to see if  
11:56:45 11 on the panel I can see that it deals  
11:56:47 12 with the -- it's a negative control 19  
11:56:52 13 NA. What it's supposed to be at Page  
11:56:55 14 63 -- oh, it's the negative control.  
11:56:57 15 So it's not the athlete's sample.

11:57:00 16 Q. Right. Correct. And do you  
11:57:04 17 see that on your -- there's a notation  
11:57:06 18 here comparing retention time analysis  
11:57:08 19 on Page 49 and Page 63?

11:57:11 20 A. Yes.

11:57:13 21 Q. And it compares where it  
11:57:15 22 says 130 seconds on Page 49?

11:57:19 23 A. Yes. But we're not -- and  
11:57:26 24 we -- I would -- you will agree with me  
11:57:29 25 that those are not the results from the

1 CHRISTIANE AYOTTE- CROSS

11:57:31 2 athlete's fraction, those are different  
11:57:34 3 samples.

11:57:34 4 Q. No, I understand.

11:57:36 5 A. And if I may say, the reason  
11:57:40 6 why we have made that notation was that  
11:57:45 7 Paul Scott was representing the athlete  
11:57:47 8 in this case, and when he came to the  
11:57:52 9 opening and analysis he has asked me  
11:57:55 10 whether we were using a machine that  
11:57:59 11 had GC/MS and GC/C/IRMS coupled  
11:58:04 12 together, and I said no, we don't.

11:58:07 13 So -- but I was willing to  
11:58:10 14 show him that the retention times --  
11:58:13 15 and that is why we indicated it in the  
11:58:15 16 doc pack, that the retention times for  
11:58:18 17 the GC/MS and the IRMS test were in  
11:58:22 18 this case in good agreement. But it is  
11:58:24 19 not, it is not a practice that would  
11:58:27 20 have had -- that we would do normally  
11:58:30 21 to write this down.

11:58:31 22 Q. To write the notation?

11:58:32 23 A. Yes.

11:58:32 24 Q. However, you do compare  
11:58:34 25 retention times between your GC/MS and

1 CHRISTIANE AYOTTE- CROSS

11:58:37 2 your GC/C/IRMS, correct?

11:58:39 3 A. Well, no, sir. But we have  
11:58:43 4 -- we put the same there, but it is not  
11:58:45 5 a criteria to -- it is not a criteria  
11:58:49 6 that we would require both to have  
11:58:52 7 exactly the same relative retention  
11:58:55 8 time before reporting it. I did it  
11:58:57 9 just for the purpose of showing Mr.  
11:59:00 10 Scott that his comment in this case, in  
11:59:04 11 this specific case would be answered.

11:59:08 12 Q. Let me go back. Earlier  
11:59:12 13 when we were talking about your method  
11:59:14 14 for identification of testosterone  
11:59:17 15 metabolites, when you were describing  
11:59:21 16 your method, you I believe had agreed  
11:59:24 17 with me at least in part that you used  
11:59:26 18 your GC/MS -- that you use a retention  
11:59:28 19 time analysis between your GC/MS and  
11:59:30 20 GC/C/IRMS; is that correct?

11:59:33 21 A. No, this is not what I said,  
11:59:36 22 sir.

11:59:36 23 Q. So why don't you tell me how  
11:59:38 24 you identify your testosterone  
11:59:39 25 metabolites between your GC/MS and your

1 CHRISTIANE AYOTTE- CROSS

11:59:42 2 -- in your testosterone tests?

11:59:44 3 A. We would look at the

11:59:53 4 GC/C/IRMS results and of the athlete's

11:59:57 5 sample, of the reference urine sample

12:00:00 6 and of the reference urine sample

12:00:05 7 negative in this case, and with our

12:00:07 8 standards, reference standards that

12:00:12 9 would be injected in the same run of

12:00:14 10 the GC/C/IRMS. So retention times

12:00:16 11 would be established by comparing --

12:00:21 12 and that is crucial to identify which

12:00:23 13 peak and which -- if the delta value

12:00:27 14 correspond to the right peaks.

12:00:28 15 So we would inject the

12:00:30 16 standard, compare the retention times

12:00:33 17 of the -- of the analytes in the

12:00:38 18 athlete's sample, in the blank sample,

12:00:42 19 with the reference standard. And then

12:00:44 20 we would get a set of delta value.

12:00:48 21 Now, after that, and that is

12:00:53 22 maybe a step -- we do it after the

12:00:55 23 GC/C/IRMS, we do the GC/MS analysis

12:00:59 24 after the GC/C/IRMS to check whether

12:01:02 25 and to prove that the peak that we have

1 CHRISTIANE AYOTTE- CROSS

12:01:06 2 analyzed by GC/C/IRMS are really those  
12:01:11 3 that they're supposed to be.

12:01:13 4 So we would take the same  
12:01:15 5 fractions and we would take the pool --  
12:01:20 6 our reference sample and we would  
12:01:22 7 acquire them on the IRMS -- on the  
12:01:25 8 GC/MS to establish the identity of the  
12:01:29 9 peaks.

12:01:29 10 But we are not, we are not  
12:01:33 11 matching retention times.

12:01:35 12 In this instance, we have  
12:01:37 13 the same retention time. In this case,  
12:01:40 14 or about the same difference, let's  
12:01:43 15 say, we have not the same absolute  
12:01:44 16 retention times, but we have the same  
12:01:47 17 distance between androstanol and 19 NA,  
12:01:54 18 but this is not a criteria.

12:02:31 19 MR. SUH: No further  
12:02:32 20 questions.

12:02:34 21 THE PRESIDENT: Mr. Young.

12:02:34 22 REDIRECT EXAMINATION

12:02:37 23 BY MR. YOUNG:

12:02:37 24 Q. Dr. Ayotte, let me start  
12:02:48 25 with the last document that you were

1 CHRISTIANE AYOTTE- REDIRECT

12:02:49 2 asked to look at. This was a case  
12:02:53 3 involving the analysis of nandrolone  
12:03:02 4 metabolites on IRMS?

12:03:03 5 A. On GC/MS and GC/C/IRMS, yes.

12:03:07 6 Q. Is nandrolone a metabolite  
12:03:14 7 of testosterone?

12:03:15 8 A. No.

12:03:16 9 Q. And do you use the same IRMS  
12:03:24 10 program when you're analyzing  
12:03:25 11 nandrolone metabolites that you use  
12:03:28 12 when you're analyzing testosterone  
12:03:30 13 metabolites?

12:03:31 14 A. No.

12:03:32 15 Q. And when you change that  
12:03:39 16 program, for example temperature, does  
12:03:45 17 that have an effect on how the  
12:03:49 18 retention times come out in IRMS?

12:03:52 19 A. Absolutely.

12:03:54 20 Q. Having looked at all the  
12:04:14 21 documents and having heard all the  
12:04:15 22 testimony, do you have any doubt that  
12:04:21 23 there was exogenous testosterone in Mr.  
12:04:24 24 Landis' stage 17 sample?

12:04:26 25 A. I have no doubt that the

1 CHRISTIANE AYOTTE- REDIRECT

12:04:28 2 metabolites of testosterone had an  
12:04:31 3 exogenous origin.

12:04:33 4 Q. And was that also your  
12:04:39 5 opinion when you first looked at the  
12:04:41 6 documentation package in this case?

12:04:44 7 A. Yes, it was my opinion. I  
12:04:47 8 found that the IRMS results were of  
12:04:50 9 high quality.

12:04:53 10 Q. And if you would have come  
12:04:55 11 to a contrary opinion about those IRMS  
12:05:02 12 results would you have expressed that  
12:05:08 13 opinion to USADA?

12:05:08 14 A. I would have expressed that  
12:05:11 15 opinion to USADA, to the UCI as well.

12:05:14 16 Q. And if you would have come  
12:05:15 17 to that contrary conclusion would you  
12:05:17 18 be here today?

12:05:17 19 A. Absolutely not.

12:05:19 20 Q. In order to establish an  
12:05:30 21 adverse analytical finding for  
12:05:33 22 exogenous testosterone, is the IRMS  
12:05:40 23 method standing alone sufficient?

12:05:43 24 A. Yes.

12:05:45 25 Q. Is it even necessary or

1 CHRISTIANE AYOTTE- REDIRECT

12:05:47 2 required to do any T/E ratio analysis?

12:05:51 3 A. I'm sorry, I -- your

12:05:54 4 question is that in order to prove a --

12:05:59 5 Q. I'll ask it again. If you

12:06:05 6 have an IRMS analysis that shows

12:06:07 7 exogenous testosterone do you even need

12:06:13 8 to do T/E ratio analysis?

12:06:16 9 A. It is said in the -- well,

12:06:21 10 I'll answer it that way. The IRMS

12:06:24 11 results are certainly sufficient to

12:06:29 12 report an adverse analytical finding.

12:06:32 13 But in the technical documents there

12:06:34 14 would have been -- there's a

12:06:36 15 requirement to also identify your --

12:06:40 16 the analyte.

12:06:42 17 So -- well, I may have

12:06:44 18 misunderstood your question.

12:06:47 19 Q. Let me start again. Is it

12:06:56 20 typical for laboratories to do screening

12:07:01 21 for testosterone abuse with the T/E ratio

12:07:07 22 method?

12:07:07 23 A. Yes.

12:07:08 24 Q. And is it acceptable that

12:07:14 25 the only -- would it be acceptable if



1 CHRISTIANE AYOTTE- REDIRECT

12:07:17 2 the only way that they confirmed the  
12:07:22 3 presence of exogenous testosterone was  
12:07:25 4 with IRMS?

12:07:25 5 A. Yes.

12:07:36 6 Q. Let me have you look at a  
12:08:01 7 series of chromatograms.

12:08:20 8 MR. YOUNG: Jennefer, let's  
12:08:24 9 start with the fraction 3 of Mr.  
12:08:28 10 Landis' A sample. It's at Exhibit 24,  
12:08:35 11 Page 173.

12:09:17 12 Q. First, do you see any matrix  
12:09:28 13 interference or other chromatography  
12:09:32 14 problems that would cause you to doubt  
12:09:36 15 the reliability of the values in the  
12:09:40 16 5-beta, 5-alpha Pdiol range?

12:09:44 17 A. No.

12:09:45 18 Q. Second, would you be  
12:09:52 19 concerned about this part of the  
12:09:56 20 chromatogram where the internal  
12:09:58 21 standard is?

12:09:59 22 A. No.

12:10:00 23 Q. And if you were concerned  
12:10:04 24 about this part of the chromatogram  
12:10:07 25 where the internal standard is, does

1 CHRISTIANE AYOTTE- REDIRECT

12:10:10 2 that have any impact on your opinion as  
12:10:15 3 to the reliability of the delta values  
12:10:19 4 here where you have the analytes of  
12:10:22 5 interest?

12:10:22 6 A. No, because the internal  
12:10:26 7 standard and the value of its -- its  
12:10:31 8 delta value is not at all involved in  
12:10:33 9 any determination of the 5-beta and  
12:10:40 10 5-alpha diols. It is not involved in  
12:10:43 11 the calculation.

12:10:45 12 Q. If you wanted to have an  
12:10:47 13 internal standard that was used for  
12:10:52 14 delta value confirmation or as a  
12:10:59 15 control for delta value, where would  
12:11:03 16 you have that internal standard elute  
12:11:11 17 in your program?

12:11:16 18 A. The characteristic of an  
12:11:18 19 internal standard are two. They must  
12:11:20 20 be close in structure to the analyte,  
12:11:22 21 and they must elute, and I don't know  
12:11:24 22 how shaky that will be, depending on  
12:11:27 23 the amount of caffeine I took, but the  
12:11:30 24 internal standard -- it's impossible,  
12:11:33 25 should be in that region of the

1 CHRISTIANE AYOTTE- REDIRECT

12:11:36 2 chromatogram. This is funny.

12:11:40 3 Q. So if you wanted a delta  
12:11:44 4 value control as opposed to a retention  
12:11:49 5 time control, you would put that  
12:11:53 6 control where?

12:11:54 7 A. Don't ask me again. But  
12:11:57 8 let's say in the region eluting between  
12:12:01 9 1200 and let's say 1700.

12:12:05 10 Q. Let me have you look at  
12:12:09 11 another chromatogram which is the blank  
12:12:14 12 urine of fraction 3 A sample. It is  
12:12:19 13 Page USADA 0170. Do you see any matrix  
12:12:52 14 interference or poor chromatography in  
12:12:54 15 the region of 5-beta, 5-alpha PdIol in  
12:13:01 16 this chromatogram?

12:13:01 17 A. No, the geography in the  
12:13:02 18 region of the analytes of interest is  
12:13:09 19 very good and the abundance of the  
12:13:11 20 peaks are good.

12:13:11 21 Q. And do you see any poor  
12:13:14 22 chromatography in the region of the  
12:13:15 23 internal standard?

12:13:20 24 A. Actually, there might have  
12:13:21 25 been a peak coming close to the

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12:13:27 2 internal standard, so there are some  
12:13:29 3 co-eluting peaks.

12:13:35 4 Q. Let's take a look at  
12:13:37 5 fraction 2 of -- I'll tell you what,  
12:13:41 6 let's do -- we'll finish with fraction  
12:13:44 7 3 first. Fraction 3 B sample is at  
12:13:50 8 0349, that's Mr. Landis'. Do you see  
12:14:01 9 any poor chromatography in the area of  
12:14:05 10 the 5-alpha and Pdiol in this  
12:14:10 11 chromatogram?

12:14:10 12 A. No, I do not.

12:14:11 13 Q. And what would your comment  
12:14:16 14 as to the chromatography in the area of  
12:14:19 15 the internal standard be?

12:14:20 16 A. Well, I would have  
12:14:22 17 difficulties in finding it at the moment  
12:14:27 18 just on the basis of what we see here.  
12:14:29 19 So it's crowded. There are peaks there.

12:14:33 20 Q. And if you were sitting at a  
12:14:35 21 computer terminal as an operator, would  
12:14:38 22 you be able to zoom in and differentiate  
12:14:42 23 peaks?

12:14:42 24 A. Yes.

12:14:43 25 Q. And does the concern that

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12:14:51 2 this is crowded have any effect on the  
12:14:57 3 validity of the delta values in this  
12:14:59 4 part of the chromatogram that isn't  
12:15:02 5 crowded?

12:15:02 6 A. Again, no, because the  
12:15:05 7 substance is not at all involved in any  
12:15:08 8 of the -- in any of the numbers  
12:15:12 9 obtained for the 5-alpha and the 5-beta  
12:15:16 10 and the pregnanediol.

12:15:20 11 Q. And have you gone through  
12:15:25 12 all of the chromatograms for Mr.  
12:15:31 13 Landis' sample in this case, the  
12:15:38 14 fraction 3, fraction 2, fraction 1 --

12:15:45 15 A. Yes.

12:15:45 16 Q. -- to look at the areas of  
12:15:47 17 interest with respect to metabolites  
12:15:48 18 and exogenous reference compounds?

12:15:50 19 A. Yes.

12:15:53 20 Q. And in those areas do you  
12:15:55 21 see any concerns with poor  
12:15:58 22 chromatography?

12:15:59 23 A. No.

12:16:03 24 Q. And would the same be true  
12:16:04 25 for the blank urines that were analyzed

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12:16:09 2 at the same time as those samples?

12:16:11 3 A. Correct.

12:16:20 4 MR. YOUNG: I have no

12:16:21 5 further questions.

12:16:25 6 MR. PAULSSON: Professor, I

12:16:28 7 have some questions as to your posture

12:16:33 8 in evaluating a case like this given

12:16:36 9 your capacity as the head of a WADA

12:16:38 10 accredited laboratory. First of all,

12:16:40 11 if somebody comes to you, not in this

12:16:47 12 case, but in any case and says we would

12:16:50 13 like your opinion, not to testify, just

12:16:53 14 we'd like you to have a look and see

12:16:55 15 what you think of an AAF which has been

12:17:02 16 declared by another accredited

12:17:05 17 laboratory which is being contested,

12:17:07 18 would it be unfair or would it be fair

12:17:09 19 to say that given your own position

12:17:14 20 your attitude before you even start

12:17:15 21 looking at it would be to think, I hope

12:17:17 22 this holds up?

12:17:20 23 THE WITNESS: Well, actually,

12:17:21 24 no, because the process is I am not under

12:17:27 25 any kind of pressure, and I am not -- I

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12:17:32 2 don't see it as, had this case not been  
12:17:37 3 done correctly, I would have absolutely  
12:17:39 4 no reason or second thoughts before  
12:17:44 5 saying it exactly as it is to the US  
12:17:48 6 Anti-Doping Agency. Because we are not  
12:17:50 7 -- it's not because on one occasion  
12:17:53 8 there's a poor lab report from let's say  
12:17:56 9 one country that it does impact on my  
12:18:00 10 career, my lab or the entire quality of  
12:18:05 11 the system. It can happen. So I would  
12:18:08 12 have -- I have not having a -- I have not  
12:18:13 13 having a priori position. I look at the  
12:18:16 14 data neutrally and objectively.

12:18:19 15 And as a matter of fact, I  
12:18:20 16 will try picking as much trouble as I  
12:18:24 17 can to be providing the testing  
12:18:29 18 authority with -- they have to know  
12:18:31 19 exactly what's the context and if there  
12:18:34 20 are mistakes, if there is trouble I  
12:18:36 21 would point it to them and the  
12:18:39 22 limitation of the test as well. So I  
12:18:41 23 don't have a priori.

12:18:44 24 MR. PAULSSON: I wasn't even  
12:18:45 25 getting to the point of when you're

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12:18:47 2 answering somebody the question, it's  
12:18:49 3 just your attitude when you're given  
12:18:52 4 this file, you say that it's not  
12:18:57 5 because a particular piece of work  
12:18:58 6 turns out not to be reliable that the  
12:19:01 7 whole system is questioned, but the  
12:19:03 8 more this happens the worse it would  
12:19:05 9 be, I assume, if it got to be a matter  
12:19:08 10 of concern?

12:19:09 11 THE WITNESS: I agree with  
12:19:10 12 you. And if I -- this is a discussion  
12:19:15 13 that is ongoing at WADA. How to -- we  
12:19:19 14 are steadily trying to improve the  
12:19:23 15 system so that we have tighter and  
12:19:27 16 tighter condition for the -- conditions  
12:19:30 17 for the lab to operate.

12:19:31 18 But -- and if I may say, it  
12:19:35 19 can happen, a B cannot confirm the A,  
12:19:39 20 it goes public and that doesn't  
12:19:40 21 undermine if let's say 10 or 20 case  
12:19:45 22 are not okay and 200,000 case okay.

12:19:48 23 MR. PAULSSON: You don't  
12:19:48 24 understand my question has to do with  
12:19:50 25 the limitations, if there are any as to



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12:19:52 2 the role of the director of a WADA  
12:19:54 3 accredited laboratory as an objective  
12:19:57 4 expert. You're saying there was no a  
12:20:01 5 priori and thank you for your answer.

12:20:03 6 The second matter is what if  
12:20:06 7 now we are in the case of an AAF which  
12:20:12 8 has hit somebody you know and trust,  
12:20:22 9 there's this terrible thing and it had  
12:20:25 10 nothing to do with your laboratory, I'm  
12:20:26 11 sorry to say, but I have a right to  
12:20:28 12 appeal this. I know you and we have a  
12:20:33 13 good relationship and this is somebody  
12:20:35 14 you like and trust and this person says  
12:20:38 15 I want to challenge this result. You  
12:20:40 16 don't know anything about this result,  
12:20:42 17 but there is -- there is difficulty in  
12:20:46 18 terms of obtaining people like  
12:20:50 19 yourself, and you'll say I can't help  
12:20:51 20 you no matter how good our relations  
12:20:54 21 are and I know you have a right to  
12:20:56 22 challenge this, and this person says  
12:20:59 23 so, advise me what should I do.

12:21:01 24 THE WITNESS: And in such a  
12:21:04 25 case, although I would be, you know,

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12:21:08 2 walking very carefully in that region,  
12:21:13 3 if somebody -- if -- and that can be an  
12:21:17 4 organization as well -- as well, you  
12:21:20 5 know. Let's take the case because --  
12:21:23 6 yes, let's say an organization,  
12:21:26 7 international federation has a decision  
12:21:29 8 on the first instance from a national  
12:21:31 9 federation exonerating an athlete when  
12:21:39 10 there was a lab that had reported an  
12:21:42 11 adverse finding. The international  
12:21:45 12 federation comes to me and say shall we  
12:21:47 13 bring this case to the arbitration,  
12:21:50 14 shall we challenge the decision in  
12:21:52 15 first instance. And I'm answering this  
12:21:55 16 like that because this is real case.  
12:21:58 17 To me I never had a friend who would  
12:22:00 18 come to me and say well, I had this  
12:22:02 19 problem.

12:22:02 20 So they would tell me, well,  
12:22:05 21 look at the decision, shall we refer  
12:22:07 22 the case to arbitration. I would look  
12:22:12 23 at the data very carefully and if I  
12:22:14 24 think there is a problem with the data  
12:22:15 25 I would not recommend going to

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12:22:17 2 arbitration with the case. So I would  
12:22:19 3 be on the side of the athlete. Have I  
12:22:21 4 done this in the past? Yes. I could  
12:22:23 5 give you the case of Thurnbull, a  
12:22:29 6 runner, an Irish runner, he was  
12:22:31 7 exonerated on first instance, the IAAF  
12:22:34 8 asked me my opinion, because the case  
12:22:37 9 was in their hands, shall we refer this  
12:22:39 10 to arbitration and I said no.

12:22:41 11 So in the instance that an  
12:22:44 12 athlete would come to me and say well,  
12:22:46 13 I have been very wrongly accused of a  
12:22:51 14 doping violation and am giving you the  
12:22:54 15 documentation package that was produced  
12:22:58 16 by the lab in Oslo, could you have a  
12:23:02 17 look at it. I would have a look at the  
12:23:04 18 documentation package and I would  
12:23:08 19 advise to -- I would tell the athlete,  
12:23:11 20 well, sorry, but the evidence are  
12:23:14 21 there, or I would maybe -- definitely I  
12:23:19 22 would go to the testing organization  
12:23:22 23 and the international federation, or  
12:23:25 24 the sport organization and I would say,  
12:23:28 25 well, I'm sorry, but I had that

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12:23:30 2 documentation package and it is not  
12:23:32 3 good.

12:23:32 4 So example from this is the  
12:23:38 5 Ian Thorpe case as well. As you know,  
12:23:40 6 it was leaked in the media that he had  
12:23:43 7 a problem with a T/E result or  
12:23:45 8 something related to the T/E result. I  
12:23:48 9 was approached to see what was my  
12:23:52 10 opinion based on the set of results  
12:23:57 11 that were obtained in this case and the  
12:23:58 12 follow-up that the Australian agency  
12:24:01 13 had done, because it was -- it is known  
12:24:07 14 publicly that the international  
12:24:09 15 federation and WADA wanted to refer the  
12:24:11 16 case to -- want to push them to go  
12:24:14 17 ahead with this case. And I've clearly  
12:24:19 18 stated that there was no ground to  
12:24:20 19 proceed further.

12:24:21 20 So I don't know how many  
12:24:22 21 example I -- I'm trying to fit more  
12:24:25 22 with not only a hypothetical situation,  
12:24:28 23 but with a real situation. I am  
12:24:33 24 comfortable that I -- if I see  
12:24:36 25 something is wrong in a lab

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12:24:39 2 documentation I would not and I have  
12:24:42 3 not in the past hesitate for a second  
12:24:44 4 to -- to advise the proper authority to  
12:24:51 5 not go forward with a case. And there  
12:24:53 6 was not a single instance where my  
12:24:56 7 opinion -- they did not consider my  
12:24:58 8 opinion and went forward with the case.

12:25:01 9 MR. PAULSSON: My question  
12:25:02 10 was slightly different. It's not so a  
12:25:05 11 matter of any question as to the bias  
12:25:10 12 the director of a WADA accredited  
12:25:12 13 laboratory might have, but simply the  
12:25:14 14 principle of the way the system  
12:25:16 15 operates. So if this person, this is  
12:25:19 16 an athlete who you like and trust, a  
12:25:22 17 member of your family, something like  
12:25:23 18 that, asks you what to do, you could  
12:25:28 19 only be of limited assistance apart  
12:25:30 20 from doing what you said you did --

12:25:31 21 THE WITNESS: I see what you  
12:25:32 22 mean.

12:25:33 23 MR. PAULSSON: If they say  
12:25:34 24 no, the lab is content with what it's  
12:25:36 25 done and the sanction is going forward

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12:25:38 2 and this person says I want to  
12:25:39 3 challenge it, where is that person  
12:25:42 4 supposed to go? What would you  
12:25:43 5 recommend?

12:25:43 6 THE WITNESS: Well, I can  
12:25:44 7 also tell you that in some instance I  
12:25:46 8 have referred them to experts that are  
12:25:51 9 not in our field but would have  
12:25:53 10 experience with testing prohibited  
12:25:55 11 substance such as ours. There are  
12:25:58 12 other labs existing doing the same  
12:26:00 13 business but not under the WADA  
12:26:03 14 accreditation. So I would definitely  
12:26:05 15 bring them to the proper expertise.

12:26:08 16 MR. PAULSSON: But then of  
12:26:09 17 course somebody might say to that  
12:26:11 18 expert you have never been a director  
12:26:12 19 of a WADA accredited laboratory, have  
12:26:15 20 you?

12:26:16 21 THE WITNESS: No, but --  
12:26:18 22 yes, but that would -- there are one or  
12:26:20 23 two that I know that are providing  
12:26:23 24 evidence regularly that are involved in  
12:26:26 25 the process and I think that a panel

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12:26:29 2 would receive their evidence and  
12:26:33 3 testimony with due consideration. They  
12:26:36 4 would be credible I think.

12:26:38 5 MR. PAULSSON: Now, asking  
12:26:39 6 you the question as an expert assisting  
12:26:42 7 the tribunal without any regard to  
12:26:44 8 where you work, take the same  
12:26:47 9 hypothetical situation, somebody you  
12:26:51 10 know and like or a member of the  
12:26:54 11 family, child of a friend, has just won  
12:27:00 12 an important competition, you've seen  
12:27:06 13 it on television, it's wonderful. Now  
12:27:08 14 something odd happens, you get a call  
12:27:10 15 on the mobile telephone from this  
12:27:12 16 person, saying they have a new rule,  
12:27:14 17 I've just given my samples and I didn't  
12:27:17 18 know this, but they're actually giving  
12:27:19 19 the athletes an option right now, I've  
12:27:23 20 just given my samples and I just have  
12:27:25 21 to tick a box and the option I have is  
12:27:27 22 to send it to any lab that I choose of  
12:27:31 23 a number of labs, they're all obviously  
12:27:33 24 WADA accredited and you will say which  
12:27:35 25 ones, and you say, well, it's not

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12:27:39 2 yours, but some others, and mentioning  
12:27:42 3 one which you think is as reliable and  
12:27:44 4 any laboratory would be. He mentions a  
12:27:46 5 second one and you think this is as  
12:27:48 6 reliable as any that could be. And the  
12:27:51 7 third one is the laboratory at  
12:27:53 8 Chatenay. Would you say to the person,  
12:27:58 9 pick any one of them?

12:28:00 10 THE WITNESS: So am I  
12:28:04 11 understanding your question -- yes, I  
12:28:06 12 would certainly include the lab in  
12:28:07 13 Paris in the list of lab that -- labs  
12:28:12 14 that can produce reliable scientific  
12:28:15 15 results.

12:28:16 16 Now, your question is a bit  
12:28:18 17 biased if I may say because you are  
12:28:20 18 talking about somebody that I would not  
12:28:23 19 like. So would I --

12:28:25 20 MR. PAULSSON: No, no.

12:28:26 21 THE WITNESS: I thought I  
12:28:27 22 understand your question like that.  
12:28:29 23 And so that is why I was a bit  
12:28:31 24 uncomfortable with the setting up of  
12:28:33 25 the question.



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12:28:35 2 MR. PAULSSON: I don't know  
12:28:36 3 where that question would have come  
12:28:38 4 from.

12:28:38 5 THE WITNESS: I thought the  
12:28:39 6 beginning of your question would have  
12:28:41 7 come from -- there's somebody you don't  
12:28:42 8 like, would you send the sample to  
12:28:44 9 Paris. So it was a bit -- yes, so no,  
12:28:47 10 I would certainly put the lab in Paris  
12:28:51 11 as reliable laboratory particularly  
12:28:53 12 with regard to IRMS and to EPO  
12:28:57 13 analysis.

12:28:58 14 MR. PAULSSON: As reliable  
12:28:59 15 as any you have any opinion about?

12:29:01 16 THE WITNESS: Absolutely.

12:29:02 17 MR. PAULSSON: Thank you.

12:29:03 18 MR. RIVKIN: Thank you.  
12:29:09 19 Your testimony has been very helpful.  
12:29:12 20 Let me ask about the quality control  
12:29:16 21 samples and manual integration. There  
12:29:22 22 are certain quality control samples  
12:29:24 23 that are supposed to fall within a  
12:29:27 24 particular range so that you know that  
12:29:29 25 the machinery is operating correctly;

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12:29:32 2 is that right?

12:29:32 3 THE WITNESS: Yes.

12:29:33 4 MR. RIVKIN: And with

12:29:39 5 respect to those quality control

12:29:40 6 samples or metabolites, is it

12:29:43 7 appropriate even for them to undertake

12:29:47 8 some manual integration?

12:29:50 9 THE WITNESS: Absolutely.

12:29:51 10 MR. RIVKIN: And why is that

12:29:53 11 if the purpose of the quality control

12:29:56 12 sample is to make sure the machine is

12:29:58 13 operating correctly and that you can

12:30:01 14 properly measure it within a certain

12:30:03 15 standard?

12:30:05 16 THE WITNESS: I think I

12:30:06 17 understand your question the following

12:30:07 18 way. You have the hardware component,

12:30:13 19 you have the mass spectrometer, you

12:30:15 20 have the chromatograph and you have the

12:30:21 21 combustion chambers. They are

12:30:23 22 producing peaks and they are producing

12:30:27 23 a number. Now, there is -- that is the

12:30:31 24 raw data.

12:30:31 25 Now, you have another

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12:30:33 2 component of the machine which is the  
12:30:35 3 software and the software controls in  
12:30:40 4 part how the injections are being made,  
12:30:42 5 but it also controls how the analysis  
12:30:47 6 of the data is being made. So it will  
12:30:53 7 based upon -- and it's not somebody  
12:30:56 8 taking a decision, but based upon how  
12:30:58 9 it has been made it's -- the  
12:31:03 10 mathematical algorithm involved made in  
12:31:07 11 it, it will -- and based upon what you  
12:31:09 12 tell him -- tell it to do. It will  
12:31:12 13 give you a result, but -- and the  
12:31:16 14 overall result is X. We will look at  
12:31:21 15 it to make sure that it did not on the  
12:31:26 16 fringe of the result made a mistake by  
12:31:29 17 deciding where to put the start and  
12:31:30 18 end.

12:31:31 19 And the reason for this is  
12:31:33 20 that it's a software. It's a machine.  
12:31:36 21 It may, depending on the matrix, take  
12:31:41 22 decision that are not the best, best  
12:31:44 23 one, but if I may say, sometimes I --  
12:31:50 24 the checking a peak and just -- you may  
12:31:53 25 just change from minus 60 -- 16.83 to

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12:31:58 2 minus 16.81, which is a 0.2. It's not  
12:32:05 3 -- they are not starting -- in my  
12:32:06 4 opinion they are not taking a value of  
12:32:09 5 minus 20 and bring it back to minus  
12:32:13 6 16.8 where it shall be. Sometimes I  
12:32:15 7 think if I compared some of the data  
12:32:18 8 they are just changing it to the second  
12:32:21 9 decimal. So it's a minor intervention.

12:32:25 10 MR. RIVKIN: And the  
12:32:28 11 laboratory standard is that three of  
12:32:31 12 the four metabolites, known metabolites  
12:32:33 13 have to fall within their known range?

12:32:38 14 THE WITNESS: Three of the  
12:32:39 15 four reference standards.

12:32:40 16 MR. RIVKIN: Reference  
12:32:41 17 standards, right.

12:32:42 18 THE WITNESS: Yes, reference  
12:32:43 19 material. So yes. And that doesn't  
12:32:46 20 mean that they could not have put it  
12:32:48 21 differently. Four must be matching by  
12:32:53 22 .5 per mil. This is the decision they  
12:32:56 23 took. And that is for the purpose of  
12:32:58 24 being able in the day-to-day practice  
12:33:00 25 to go a step forward.

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12:33:04 2 So it's something -- it's a  
12:33:05 3 criteria and it seems to be relatively  
12:33:14 4 reliable. It seems to be a good  
12:33:17 5 criteria because most of the time in  
12:33:19 6 what I've seen the controls were  
12:33:21 7 providing better results than the  
12:33:28 8 tolerance from the lab.

12:33:30 9 MR. RIVKIN: Why shouldn't,  
12:33:34 10 given the fact that they're known  
12:33:36 11 reference samples, why shouldn't the  
12:33:38 12 lab be able to hit all four?

12:33:40 13 THE WITNESS: Yes, there is  
12:33:41 14 no problem with this. And actually, we  
12:33:43 15 can see, and I've extracted all their  
12:33:45 16 data, even the charts, and I was able  
12:33:48 17 to see that in the controls it's always  
12:33:52 18 the four metabolites -- the four  
12:33:56 19 reference material are provided values  
12:33:57 20 that are within, well within. So it's  
12:34:01 21 just to have a criteria for your -- in  
12:34:05 22 your procedures that allow you to go a  
12:34:08 23 step forward.

12:34:09 24 So there is -- we can ask  
12:34:11 25 all four of them to be like that, but

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12:34:13 2 when we're testing that criteria with  
12:34:18 3 the results that they produce,  
12:34:21 4 actually, the criteria, they are  
12:34:24 5 hitting the right value 99 percent of  
12:34:27 6 the time.

12:34:28 7 MR. RIVKIN: In your own lab  
12:34:30 8 is your criteria for the reference  
12:34:32 9 controls three of the four or four of  
12:34:33 10 the four?

12:34:34 11 THE WITNESS: No, we are not  
12:34:35 12 stating it that way. So we would -- I  
12:34:43 13 must admit, I should have prepared for  
12:34:45 14 being asked, but we have five different  
12:34:47 15 IRMS procedures and I don't know the  
12:34:48 16 detail of each one, but if we had -- if  
12:34:53 17 we had one out of four or five  
12:35:00 18 certified steroids that would come  
12:35:02 19 totally out of range we would certainly  
12:35:05 20 wonder why is it so. So I don't know  
12:35:08 21 by heart our procedure, but that seems  
12:35:10 22 to me like sound. If you put your  
12:35:14 23 requirements so strict you cannot move  
12:35:16 24 ahead, then you will not be able to  
12:35:18 25 run.

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12:35:18 2 But in this case, it was --  
12:35:20 3 it went perfect for all four.

12:35:23 4 MR. RIVKIN: And just so  
12:35:25 5 that I understand what it means to hit  
12:35:27 6 the target, you were here on Saturday  
12:35:29 7 when I was having problems  
12:35:30 8 understanding some numbers.

12:35:31 9 THE WITNESS: I was not  
12:35:32 10 there on Saturday, I'm sorry, but I  
12:35:33 11 read the transcript.

12:35:34 12 MR. RIVKIN: Okay. We were  
12:35:36 13 looking at one set of numbers where  
12:35:42 14 Eurofins said the metabolite was 16.3  
12:35:47 15 plus or minus .3 per mil, and the  
12:35:50 16 actual result showed 16.69 which would  
12:35:53 17 be outside of --

12:35:56 18 THE WITNESS: .39.

12:35:58 19 MR. RIVKIN: Yes, it would  
12:35:59 20 be .39. In your view is that hitting  
12:36:02 21 the target or missing the target?

12:36:04 22 THE WITNESS: Absolutely  
12:36:04 23 hitting the target. When Eurofins  
12:36:08 24 gives a value for a given steroid it is  
12:36:13 25 a certification agency. It is giving

1 CHRISTIANE AYOTTE- REDIRECT

12:36:15 2 you, let's say, minus .16 plus 3 plus  
12:36:20 3 minus .3. So that is as I understand,  
12:36:22 4 and that they do the same thing our  
12:36:27 5 Canadian organization, it gives the --  
12:36:31 6 the standard deviation. So when -- and  
12:36:36 7 what that does mean, it's the same  
12:36:38 8 thing with the values that we produce.  
12:36:41 9 You have this minus 16.3 and the  
12:36:45 10 plus/minus .3 it means that with 95  
12:36:51 11 percent coverage factor, which would be  
12:36:53 12 multiplying by two, you have the values  
12:36:57 13 within .6, from one side to the other  
12:37:00 14 side.

12:37:00 15 Now, if you expand your --  
12:37:05 16 expand it to 99 percent, which would  
12:37:08 17 mean that 99 percent of the time you  
12:37:11 18 are within three times that .3, so  
12:37:14 19 meaning .9. So even for Eurofins  
12:37:19 20 that's -- there is kind of an  
12:37:20 21 uncertainty, if I may say, or a range  
12:37:25 22 of data that they would expect.

12:37:26 23 Now, this 16.3, it comes in  
12:37:32 24 the lab, and then the lab measures it  
12:37:35 25 regularly. So in one day, on one day



1 CHRISTIANE AYOTTE- REDIRECT

12:37:38 2 if they have .39 or let's say even .5  
12:37:44 3 greater than the mean value measured by  
12:37:47 4 Eurofins, Eurofins is reporting a mean  
12:37:49 5 of the value that they measured, it's  
12:37:51 6 within the plus 2 standard deviation  
12:37:57 7 measured by Eurofins.

12:37:58 8 And not only that, I think  
12:38:00 9 it's within the range but also the goal  
12:38:06 10 is for the lab to measure it close to  
12:38:11 11 what the Eurofins value is, but  
12:38:13 12 systematically, within their  
12:38:15 13 requirement it has to be within .2 per  
12:38:20 14 mil of the exact value and it stays  
12:38:24 15 like that, they have charts showing it.

12:38:27 16 MR. RIVKIN: As I understand  
12:38:28 17 it, you reviewed the longitudinal study  
12:38:32 18 of how it hit that number and that it  
12:38:33 19 was always within that .2?

12:38:36 20 THE WITNESS: Yes. If I may  
12:38:38 21 say on top of that, they always measured  
12:38:41 22 it a bit more negatively. Instead of  
12:38:46 23 being minus 16.3 it is often minus 16.40  
12:38:52 24 something, and although it is close, it  
12:38:55 25 is also on the side of -- on the safe

1 CHRISTIANE AYOTTE- RE CROSS

12:39:02 2 side because being more negative the  
12:39:04 3 delta/delta values measured from that  
12:39:08 4 will be not as wide.

12:39:15 5 MR. RIVKIN: Thank you.

12:39:18 6 THE PRESIDENT: I have no  
12:39:19 7 questions. Does counsel have any  
12:39:22 8 follow-up questions?

12:39:24 9 MR. YOUNG: I have just one.  
12:39:26 10 Actually, who would you like to have go  
12:39:28 11 first?

12:39:29 12 THE PRESIDENT: Mr. Suh, do  
12:39:30 13 you have any questions?

12:39:31 14 MR. SUH: I do.

12:39:32 15 THE PRESIDENT: Please  
12:39:33 16 proceed.

12:39:33 17 RE CROSS EXAMINATION

12:39:36 18 BY MR. SUH:

12:39:36 19 Q. Dr. Ayotte, you just  
12:39:38 20 testified you looked at some historical  
12:39:39 21 data about the quality controls and  
12:39:41 22 that they all fell within the  
12:39:43 23 measurement of error; is that correct?

12:39:44 24 A. I said basically what I've  
12:39:46 25 seen was to -- I think there was to a

1 CHRISTIANE AYOTTE- RE CROSS

12:39:52 2 couple of exception the mean and the  
12:39:53 3 standard deviation was around .2, yes,  
12:39:56 4 with a couple of exceptions on the 75  
12:39:59 5 measurements, yes.

12:40:02 6 MR. SUH: Todd, could you  
12:40:04 7 bring up that chart. Apparently it's  
12:40:28 8 getting loaded into our program so that  
12:40:30 9 it can be displayed.

12:40:40 10 MR. YOUNG: Do you want to  
12:40:41 11 give her a page number to look at?

12:40:45 12 MR. SUH: It's Page 37 of  
12:40:48 13 the USADA -- it's Page 37 of their  
12:40:52 14 pretrial brief from below.

12:41:29 15 MS. SLOAN: Are you talking  
12:41:30 16 about the brief that's dated April  
12:41:33 17 16th, 2007? I'm just trying to find it  
12:41:35 18 for her.

12:41:38 19 MR. SUH: Yes, April 16th,  
12:41:40 20 2007.

12:41:42 21 MS. SLOAN: What page are  
12:41:43 22 you looking at?

12:41:44 23 MR. SUH: It's Page 37 and  
12:41:47 24 it's the figure 6 up on the screen now.

12:41:56 25 A. Yes.

1 CHRISTIANE AYOTTE- RE CROSS

12:41:57 2 Q. Have you seen this chart  
12:42:02 3 before?

12:42:02 4 A. Yes.

12:42:03 5 Q. And it indicates that on  
12:42:06 6 four occasions that the Mix Cal  
12:42:10 7 Acetate, in the Mix Cal Acetate the  
12:42:13 8 5-alpha androstanol acetate has fallen  
12:42:17 9 outside the measurement of error?

12:42:19 10 A. No, on three occasions and  
12:42:20 11 two were close. It's three times over  
12:42:23 12 75 I said. Most of the time it hits,  
12:42:25 13 on few occasion it did it was slightly  
12:42:29 14 outside their tolerance range.

12:42:33 15 Q. Well there are four errors  
12:42:35 16 there. Are you saying that USADA is  
12:42:36 17 mistaken when they've identified one as  
12:42:39 18 being outside of the applicable range?

12:42:40 19 A. Okay, I see on three of  
12:42:43 20 four, yes. I see four.

12:42:44 21 Q. You see four?

12:42:48 22 A. Yes.

12:42:48 23 Q. On those four occasions the  
12:42:50 24 historical data has fallen outside the  
12:42:52 25 measurement?

1 CHRISTIANE AYOTTE- REDIRECT

12:42:53 2 A. It was fallen outside  
12:42:55 3 slightly of their tolerance, their  
12:42:57 4 tolerance, yes.

12:43:04 5 MR. SUH: No further  
12:43:05 6 questions.

12:43:06 7 THE WITNESS: The  
12:43:10 8 androstanol, yes.

12:43:10 9 THE PRESIDENT: Mr. Young.

12:43:13 10 REDIRECT EXAMINATION

12:43:16 11 BY MR. YOUNG:

12:43:16 12 Q. You talked about 75  
12:43:19 13 occasions. If you look at the document  
12:43:20 14 in Exhibit 26, LNDD 448, and then go to  
12:43:44 15 the second page of that, is this the  
12:43:49 16 series of documents that you were  
12:43:50 17 talking about in terms of the tolerance  
12:43:57 18 of the Mix Cal Acetate control on 75  
12:44:02 19 occasions?

12:44:02 20 A. Yes.

12:44:04 21 Q. In response to Mr. Rivkin's  
12:44:10 22 question about the performance of the  
12:44:18 23 instrument quality controls, does LNDD  
12:44:23 24 have a formal document where they  
12:44:26 25 document that performance?

1 CHRISTIANE AYOTTE- REDIRECT

12:44:29 2 A. The -- I'm sorry. Yes.

12:44:34 3 Before the analysis you would have in  
12:44:37 4 the documentation package the results  
12:44:39 5 of their analysis on the certified  
12:44:46 6 reference material.

12:44:47 7 Q. Take a look at USADA 0174 in  
12:44:50 8 Exhibit 24. Can you read for me or  
12:45:05 9 translate for me the title of the form  
12:45:07 10 ECC 10.

12:45:10 11 A. This is a record which is  
12:45:14 12 entitled verification of instrumental  
12:45:19 13 performances in confirmation -- in a  
12:45:23 14 GC/C/IRMS confirmation.

12:45:25 15 Q. And so after the analyst has  
12:45:36 16 checked the instrument tune, do they  
12:45:42 17 take some action?

12:45:44 18 A. As that record shows, once  
12:45:48 19 the tune had been done when the peak  
12:45:51 20 center has been achieved and plateaued  
12:45:57 21 at values greater than 10 volts, then  
12:46:00 22 they record that the tune is confirmed,  
12:46:03 23 conformed. It says yes, so they tick  
12:46:09 24 mark a box saying that the tune is  
12:46:11 25 within the zone selected.

1 CHRISTIANE AYOTTE- REDIRECT

12:46:15 2 Q. Do they do the same thing  
12:46:17 3 with instruments stability?

12:46:21 4 A. Same thing, this is just the  
12:46:23 5 next step, step 2 for the stability of  
12:46:26 6 the instrument and it says specification,  
12:46:30 7 deviation measured between -- between the  
12:46:33 8 maximum value and the minimum value of  
12:46:36 9 the ratio of the ion 2 over 1 must be  
12:46:43 10 plus or minus 0.5 per mil and they say  
12:46:46 11 that stability is it confirmed and it  
12:46:48 12 says yes.

12:46:51 13 Q. So is the two over one less  
12:46:53 14 than 0.5 the criteria?

12:46:56 15 A. Yes.

12:46:57 16 Q. And then when they have that  
12:47:01 17 criteria they check and say they oui,  
12:47:04 18 or no, they met it or not met it?

12:47:10 19 A. Yes.

12:47:10 20 Q. And the third is the Mix Cal  
12:47:12 21 IRMS?

12:47:12 22 A. Yes.

12:47:13 23 Q. And what are the values that  
12:47:21 24 they write in there?

12:47:24 25 A. So it's written obtain

1 CHRISTIANE AYOTTE- REDIRECT

12:47:31 2 values per mil for three injections and  
12:47:33 3 for each of the four alkane making up  
12:47:38 4 that Mix Cal IRMS, decane, undecane,  
12:47:46 5 dodecane and methyldecanoate, they  
12:47:50 6 register the mean and the standard  
12:47:52 7 deviation, and just under that box it  
12:47:56 8 is written specification and when --  
12:48:00 9 precision conforme, so when the  
12:48:04 10 precision is deemed to be conformed --  
12:48:07 11 in conformity, in conformity with their  
12:48:10 12 requirements, then they put tick mark  
12:48:13 13 yes.

12:48:19 14 Q. And then on Page 175. When  
12:48:28 15 they're dealing with the quality  
12:48:30 16 control Mix Cal Acetate, what do they  
12:48:33 17 do?

12:48:33 18 A. This is now under the header  
12:48:35 19 calculation of the instrument, they  
12:48:39 20 record for the four steroid reference  
12:48:43 21 material, certified reference material,  
12:48:47 22 they record the delta values obtained  
12:48:50 23 from the analysis before and after the  
12:48:54 24 athlete's fraction sample, and what you  
12:48:57 25 have handwritten is the header, data



1 CHRISTIANE AYOTTE- REDIRECT

12:49:01 2 007 and data 14, the results of both  
12:49:05 3 pre- and post-sample injections, and  
12:49:09 4 they record the absolute delta value  
12:49:11 5 obtained during the testing for each of  
12:49:16 6 the four reference material.

12:49:19 7 And then they go just below,  
12:49:22 8 there is a box recording what would be  
12:49:26 9 the tolerance or maximum deviation  
12:49:30 10 obtained with that testing when  
12:49:33 11 compared to the certified reference  
12:49:35 12 values. So for each you have  
12:49:39 13 theoretical values, so those are the  
12:49:42 14 one provided by Eurofins. For each  
12:49:45 15 steroid they would write down the  
12:49:46 16 certified delta value and tolerance  
12:49:52 17 plus/minus .5 per mil. So that would  
12:49:56 18 tell the analyst to compare, let's say,  
12:49:59 19 the minus 30.56, obtained in the second  
12:50:05 20 injection of the Mix Cal for the  
12:50:07 21 5-alpha androstanol acetate. They  
12:50:09 22 would see whether that value is within  
12:50:12 23 the theoretical value plus/minus 0.5  
12:50:18 24 per mil, and if, after reviewing all  
12:50:20 25 this it is within their specification,

1 CHRISTIANE AYOTTE- REDIRECT

12:50:23 2 then they say the tick mark, as they  
12:50:27 3 did here, the box saying yes.

12:50:30 4 Q. So is it the case that for  
12:50:34 5 both injections of the Mix Cal Acetate  
12:50:43 6 all four of the substances measured  
12:50:46 7 were within the theoretical value?

12:50:48 8 A. Yes.

12:50:48 9 Q. And then at the bottom of  
12:50:53 10 this page 0175, there are signatures.

12:50:59 11 A. Yes.

12:50:59 12 Q. And why is that on a  
12:51:03 13 document like this?

12:51:05 14 A. You have to understand that  
12:51:08 15 documents like that are part of the  
12:51:10 16 quality system, and the overall quality  
12:51:13 17 system is composed of general policy, a  
12:51:19 18 manual, and then it's like a tree going  
12:51:23 19 in level, three documents that are  
12:51:28 20 those records. Such records, such  
12:51:32 21 forms. So it's part of the quality  
12:51:34 22 process and within those procedures it  
12:51:39 23 would indicate that the -- those  
12:51:42 24 verifications step had to be viewed and  
12:51:47 25 reviewed by not only the analyst doing

1 CHRISTIANE AYOTTE- REDIRECT

12:51:50 2 the operation, but also by the  
12:51:55 3 responsible.

12:51:55 4 So in this case we have that  
12:51:57 5 the results were viewed as being in  
12:52:00 6 conformity and that operator 49 signed  
12:52:07 7 it on the 24th of July, and that the  
12:52:12 8 senior analyst, the responsible  
12:52:16 9 operator 19, which is I think Corinne  
12:52:20 10 Buisson, signed the results and  
12:52:22 11 reviewed the result and judged them in  
12:52:27 12 conformity.

12:52:28 13 So it is written validation.  
12:52:30 14 So there is a validation step and  
12:52:32 15 validation brought to the data  
12:52:36 16 recording.

12:52:37 17 MR. YOUNG: No further  
12:52:38 18 questions.

12:52:40 19 THE PRESIDENT: Thank you  
12:52:41 20 very much, professor. You're free to  
12:52:43 21 go now.

12:52:43 22 MR. SUH: May I just indulge  
12:52:45 23 the chair with just a couple of  
12:52:47 24 questions on this last discussion?

12:52:49 25 THE PRESIDENT: Yes.

1 CHRISTIANE AYOTTE- RE CROSS

12:52:50 2 RE CROSS EXAMINATION

12:52:52 3 BY MR. SUH:

12:52:52 4 Q. Dr. Ayotte, with respect to  
12:52:53 5 the form that you were just looking at,  
12:52:56 6 you don't know how many times with  
12:52:58 7 respect to each of those target peaks  
12:53:01 8 they were manually integrated, do you?

12:53:02 9 A. It doesn't bother me at all.  
12:53:08 10 It's not even an issue.

12:53:09 11 Q. I'm sorry, that's not my  
12:53:12 12 question. You don't know how many  
12:53:13 13 times each one of them may have been  
12:53:15 14 manually integrated, do you?

12:53:16 15 A. I don't.

12:53:17 16 Q. And you don't know what  
12:53:20 17 values were looked at along the way of  
12:53:23 18 that -- of any manual integration  
12:53:25 19 process, if any, do you?

12:53:27 20 A. No, but we have the  
12:53:29 21 chromatograms in support.

12:53:32 22 Q. And you don't know whether  
12:53:35 23 or not five or six steps or more or  
12:53:39 24 fewer or greater steps were taken in a  
12:53:41 25 manual integration process with any of

1 CHRISTIANE AYOTTE- RE CROSS

12:53:44 2 these peaks that we've talked about, do  
12:53:45 3 you?

12:53:45 4 A. No, I do not.

12:53:48 5 Q. And that's because there's  
12:53:50 6 no record of it, correct?

12:53:51 7 A. And you -- I've never seen a  
12:53:53 8 record of detailed step in manual  
12:53:58 9 integration, never seen it.

12:53:59 10 Q. Do you find it -- earlier  
12:54:02 11 you testified that all of the portions  
12:54:04 12 of the chromatograms showed good  
12:54:08 13 chromatography. So do you find it  
12:54:11 14 curious that there are no Mix Cal  
12:54:14 15 Acetates that fall outside of standard,  
12:54:16 16 yet the 5-alpha androstanol AC falls  
12:54:22 17 outside of standard in the samples  
12:54:24 18 themselves?

12:54:24 19 A. No, I don't find it bizarre  
12:54:26 20 at all.

12:54:27 21 MR. SUH: No further  
12:54:28 22 questions.

12:54:29 23 MR. RIVKIN: Can you explain  
12:54:30 24 why not?

12:54:34 25 THE WITNESS: Because the --

1 CHRISTIANE AYOTTE- RE CROSS

12:54:35 2 because, first, the 5-alpha androstanol  
12:54:38 3 is being added in the matrix and it's  
12:54:42 4 obviously eluting in the region of the  
12:54:46 5 chromatograms where we have more peaks  
12:54:50 6 showing up.

12:54:50 7 So it is not a concern to me  
12:54:54 8 if on, I think it's on four occasions  
12:54:58 9 out of, in the blank out of the, let's  
12:55:01 10 say it makes -- the twelfth time that  
12:55:07 11 the samples blank A and B -- no, let me  
12:55:11 12 say this differently. In the A and B  
12:55:13 13 analysis of the blank and athlete's  
12:55:16 14 sample of all three fractions I think  
12:55:19 15 there were two occasions each time  
12:55:21 16 where that specific androstanol was  
12:55:25 17 off, and I did not at all -- it did not  
12:55:29 18 at all make me nervous, first, because  
12:55:31 19 it was in the region of the  
12:55:33 20 chromatogram where we have many peaks,  
12:55:35 21 and then secondly, because it has not  
12:55:38 22 at all involved the measurement of the  
12:55:40 23 delta values.

12:55:43 24 MR. RIVKIN: Thank you.

12:55:47 25 THE PRESIDENT: You now are

1 CHRISTIANE AYOTTE- RE CROSS

12:55:50 2 free to leave.

12:55:50 3 THE WITNESS: Thank you.

12:55:57 4 THE PRESIDENT: We're going

12:55:58 5 to take the lunch break now. It will

12:56:00 6 be from one to two and we will start

12:56:02 7 sharp at 2 o'clock with Mr. Suh's

12:56:06 8 closing. And then from three to four

12:56:13 9 we'll hear from Mr. Young, and from

12:56:14 10 four to 4:15, Mr. Suh's brief response.

12:56:20 11 And then beyond that there will be some

12:56:22 12 remarks and discussion with the

12:56:24 13 tribunal about administrative matters.

12:56:27 14 We'll see you here sharp at two.

12:56:35 15 (Lunch recess: 12:56 p.m.)

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12:56:35 2 A F T E R N O O N S E S S I O N

14:02:15 3 2:02 p.m.

14:02:15 4 THE PRESIDENT: Mr. Suh,  
14:02:20 5 would you please proceed.

14:02:23 6 MR. SUH: May I ask the  
14:02:24 7 panel, would you like the closing  
14:02:26 8 statements to be delivered from the  
14:02:28 9 table or from --

14:02:29 10 THE PRESIDENT: Whatever  
14:02:30 11 suits you. We're comfortable either  
14:02:32 12 way.

14:02:35 13 MR. SUH: Which way would  
14:02:36 14 you prefer?

14:02:37 15 THE PRESIDENT: I'd rather  
14:02:38 16 you stay there.

14:02:39 17 MR. SUH: Then I like it  
14:02:41 18 fine.

14:02:42 19 THE PRESIDENT: I've got a  
14:02:43 20 better eye line this way.

14:02:48 21 MR. SUH: I'd like to thank  
14:03:08 22 the panel for the attention they have  
14:03:10 23 paid to the case and for, frankly, the  
14:03:16 24 opportunity to deliver a closing with a  
14:03:18 25 lack of formality that I would normally



1 P R O C E E D I N G S

14:03:21 2 otherwise, or we would normally

14:03:22 3 otherwise do it.

14:03:24 4 It gives us an opportunity

14:03:26 5 to talk I think really about some of

14:03:30 6 the issues that we have seen as Mr.

14:03:34 7 Paulsson's talked about in a more

14:03:36 8 impressionistic or more organic way.

14:03:39 9 We're not going to have time to talk

14:03:41 10 about everything and some of those

14:03:42 11 issues will be included in our brief.

14:03:44 12 It's not that they're not important, we

14:03:46 13 just don't have time.

14:03:47 14 This case is, I am fully

14:03:51 15 aware, unusual. And it has a history,

14:03:53 16 and I think because it has a history, I

14:03:55 17 think it is reviewing, at least from

14:03:58 18 our perspective, the beginning of the

14:04:01 19 case and how we got to be where we are

14:04:03 20 and how we see some of the allegations

14:04:05 21 started and where we have ended up.

14:04:08 22 At the beginning of the

14:04:10 23 case, way back in the discovery phase,

14:04:14 24 what we had consistently heard, and

14:04:16 25 this is reflected in the documents

1 P R O C E E D I N G S

14:04:17 2 below, that in essence, the laboratory  
14:04:21 3 procedures, the quality controls, the  
14:04:26 4 testing itself, all the processes were  
14:04:28 5 utterly reliable and valid, they were  
14:04:33 6 very broad general statements and they  
14:04:34 7 were used basically in connection with  
14:04:36 8 discovery requests to assert that we  
14:04:38 9 didn't really need any other discovery,  
14:04:40 10 it was unnecessary.

14:04:41 11 That gradually changed over  
14:04:44 12 time, and there were two big events,  
14:04:47 13 the reprocessing and the retesting  
14:04:49 14 event, they're two different events, as  
14:04:51 15 the panel well knows. The reprocessing  
14:04:53 16 are the reprocessing of the values from  
14:04:56 17 sample 1, 995474, and the retesting of  
14:05:00 18 the previously negative T/Es and in  
14:05:02 19 four of those instances LNDD saw fit to  
14:05:05 20 return positive IRMS results.

14:05:07 21 At the AAA proceeding we  
14:05:10 22 heard a lot about sample 995474 and we  
14:05:13 23 also heard a lot about the other four  
14:05:15 24 stages, the ones that were reported  
14:05:17 25 positive after the negative T/Es. And

1 P R O C E E D I N G S

14:05:19 2 a lot of discussion and talk about how  
14:05:22 3 they were reliable, which is why you  
14:05:23 4 see so much discussion about the log  
14:05:26 5 files down below.

14:05:29 6 During this hearing we  
14:05:31 7 started out really with -- I think this  
14:05:35 8 is -- I'm 99 percent sure of this but I  
14:05:38 9 don't think really any of the USADA's  
14:05:40 10 declarations talk about the other four  
14:05:41 11 test results anymore. There are severe  
14:05:48 12 chromatographic problems with them and  
14:05:50 13 there are severe problems with the way  
14:05:51 14 they were done. And frankly, I think  
14:05:53 15 even USADA has not talked extensively  
14:05:56 16 about them.

14:05:58 17 As we have proceeded through  
14:05:59 18 this hearing itself, we've been looking  
14:06:01 19 at the samples themselves and we've  
14:06:02 20 focused on something quite unusual,  
14:06:05 21 which is to my mind at least from a  
14:06:06 22 scientific standpoint and believe me  
14:06:08 23 I'm a layperson in this arena, we look  
14:06:11 24 at no longer just the sample runs or  
14:06:14 25 the quality controls, we look at the --

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14:06:17 2 we're asked to look at the F3, the B F3  
14:06:20 3 and the A F3 and the lab technicians  
14:06:23 4 and even Dr. Matthews I believe, they  
14:06:25 5 tell us not to even look at the entire  
14:06:29 6 chromatogram any more, just look at the  
14:06:31 7 second half of the F3 sample, F3  
14:06:35 8 chromatogram for A and B and that  
14:06:37 9 somehow that should give the panel the  
14:06:39 10 comfortable satisfaction that  
14:06:40 11 everything was done right here and that  
14:06:43 12 it supports an adverse analytical  
14:06:46 13 finding and given the seriousness of  
14:06:49 14 the allegations at issue.

14:06:50 15 And that's where we really  
14:06:52 16 begin. I'm going to talk about  
14:06:54 17 presumption especially in relation to  
14:06:56 18 accreditation. I think all of us who  
14:06:58 19 have tried cases and who are as the  
14:07:02 20 panel arbitrators, I think  
14:07:06 21 fundamentally, although you can  
14:07:07 22 describe a burden however you wish or  
14:07:09 23 the standard of proof however you wish,  
14:07:11 24 it ultimately comes down to a sense  
14:07:13 25 that what was being done was being done

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14:07:16 2 properly and what you were relying on  
14:07:18 3 is right. There are fancy ways to put  
14:07:21 4 it, there are complex ways to put it.  
14:07:24 5 It is a very human assessment at the  
14:07:26 6 end of the day of what is right, what  
14:07:28 7 is correct, what is fair, and what  
14:07:31 8 gives us an opportunity to walk away  
14:07:32 9 with a comfortable satisfaction I think  
14:07:35 10 is the way to put it.

14:07:37 11 And I would submit to the  
14:07:39 12 panel that there is overwhelming  
14:07:41 13 evidence that that has not occurred.

14:07:44 14 Let me first talk about the  
14:07:47 15 lack of accreditation. Really the lack  
14:07:50 16 of accreditation defines our burden in  
14:07:52 17 this case. If there is no  
14:07:54 18 accreditation, there is no presumption,  
14:07:57 19 and USADA must prove the adverse  
14:08:00 20 analytic finding by reliable means.  
14:08:04 21 What that means really is that USADA  
14:08:06 22 must establish that the carbon isotope  
14:08:08 23 ratio test was conducted by LNDD in  
14:08:11 24 accordance with the scientific  
14:08:12 25 community's practice and procedures and

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14:08:14 2 that LNDD satisfied itself as to the  
14:08:17 3 validity of the method before using it.  
14:08:19 4 That's taken from the Tyler Hampton  
14:08:21 5 case. And it must be the specific  
14:08:23 6 method used by the laboratory, not a  
14:08:24 7 hypothetical method, which is an  
14:08:26 8 important issue as we go on. It's got  
14:08:28 9 to be the method that was used and it  
14:08:30 10 must have been shown to be reliable.

14:08:32 11 So we would submit to you  
14:08:35 12 that USADA must prove that the CIR test  
14:08:38 13 was performed properly when testing  
14:08:40 14 stage 17 samples. There are numerous  
14:08:43 15 reasons why we should believe that the  
14:08:46 16 carbon isotope ratio test is not  
14:08:48 17 accredited.

14:08:51 18 Let's begin with a summary  
14:08:53 19 of the testimony. First of all, the  
14:08:56 20 testimony in the declarations is that  
14:08:59 21 there is this combination of some sort  
14:09:02 22 of peak pattern matching and blank  
14:09:06 23 urine for purposes of identification.  
14:09:08 24 There's no SOP for peak pattern  
14:09:12 25 matching and there's no SOP for blank

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14:09:14 2 urine identification. The most  
14:09:17 3 important thing when we look at this is  
14:09:18 4 that there appears to be no clear,  
14:09:20 5 consistent method described about the  
14:09:24 6 way this is done.

14:09:25 7 There is no validation for  
14:09:28 8 positivity criteria or quality control  
14:09:31 9 criteria. And before I go into the  
14:09:34 10 rest of these points let me just say  
14:09:35 11 something which is an issue that will  
14:09:37 12 come up. When we look at the method  
14:09:39 13 for identification of testosterone  
14:09:41 14 metabolites in this case, let me  
14:09:43 15 explain to you what we did, which is we  
14:09:44 16 laid out all the declarations on the  
14:09:47 17 table and all the transcripts and we  
14:09:49 18 sat and had an argument among ourselves  
14:09:53 19 for hours yesterday about what the  
14:09:56 20 method is. That alone should tell you  
14:09:59 21 that there is no method that is  
14:10:01 22 accredited. The method that is  
14:10:03 23 accredited should not be either  
14:10:07 24 difficult to explain or unclear or  
14:10:09 25 subject to vigorous debate as to what

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14:10:13 2 in fact is done by LNDD.

14:10:15 3 And when we look at that,  
14:10:17 4 first of all, I would encourage the  
14:10:19 5 panel to discount the views of outside  
14:10:23 6 experts who weren't there. I mean to  
14:10:24 7 the extent they say this is what LNDD  
14:10:26 8 did, I think that is nowhere near as  
14:10:29 9 important as what LNDD technicians  
14:10:32 10 themselves say they did.

14:10:33 11 And it is an unusual thing I  
14:10:38 12 think if there is a method, the method  
14:10:39 13 that was accredited should be clear on  
14:10:42 14 its face. It should not be difficult  
14:10:44 15 to see and it should be easily  
14:10:45 16 understandable, at least not on  
14:10:49 17 scientific terms, I don't mean to  
14:10:51 18 grossly generalize, but it should be  
14:10:53 19 describable without severe  
14:10:56 20 contradiction and at least without the  
14:10:58 21 severe contradiction we see here.

14:10:59 22 Let me say this also, that  
14:11:01 23 in the testimony I think the panel also  
14:11:03 24 heard that Claire Frelat was the person  
14:11:05 25 who met with the COFRAC auditor and



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14:11:07 2 that was on February 9 and 10 of 2006.  
14:11:13 3 As you've also heard from her testimony  
14:11:16 4 during cross examination she wasn't  
14:11:17 5 trained or validated to perform the  
14:11:19 6 carbon isotope ratio test until the end  
14:11:21 7 of February, until the end of February,  
14:11:26 8 and furthermore, she was not listed as  
14:11:28 9 an IRMS analyst on the February audit.

14:11:31 10 Todd, if you could bring up  
14:11:32 11 that sheet, LNDD 405. That might be  
14:11:40 12 helpful to look at.

14:11:41 13 The bottom line here is that  
14:11:42 14 you heard lots of testimony about the  
14:11:44 15 fact that she was only able to work on  
14:11:46 16 blank urines. She wasn't allowed to  
14:11:49 17 work on samples until the end of  
14:11:51 18 February, and yet February 9 and 10  
14:11:53 19 she's the person -- and the training  
14:11:54 20 took a period of time between the time  
14:11:56 21 she began at the end of January,  
14:11:58 22 February 9 or 10, 10 days into it she  
14:12:01 23 meets with the COFRAC auditor, there is  
14:12:03 24 no comfortable satisfaction that she  
14:12:05 25 was well trained enough the techniques,

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14:12:07 2 if it in fact -- if in fact this was  
14:12:09 3 all true, that the COFRAC auditor would  
14:12:13 4 have been in a place to understand from  
14:12:16 5 the most junior person in the IRMS  
14:12:18 6 testing analysis section what their  
14:12:22 7 method was.

14:12:22 8 So another indicator.

14:12:27 9 MR. RIVKIN: Assume that's  
14:12:29 10 true, where does that leave us? Does  
14:12:32 11 that mean we disregard the COFRAC  
14:12:36 12 accreditation?

14:12:37 13 MR. SUH: I think that we  
14:12:39 14 would -- I think that leaves you with  
14:12:42 15 the inability to rely on any  
14:12:46 16 accreditation status with respect to  
14:12:48 17 the methods that we see at issue here.  
14:12:52 18 The methods being the identification of  
14:12:56 19 testosterone metabolites and the  
14:12:57 20 performance of the carbon isotope ratio  
14:13:03 21 test. If the COFRAC auditor is that  
14:13:05 22 person's job and the person's name  
14:13:07 23 escapes me, because it wasn't Mr.  
14:13:09 24 Leguy, he was not the person who was on  
14:13:12 25 site. That person could not have --

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14:13:17 2 Ms. Frelat could not have explained or  
14:13:19 3 conducted the test in a way, per her  
14:13:22 4 own testimony, because she wasn't  
14:13:24 5 completely validated yet, in a way that  
14:13:26 6 would allow the COFRAC auditor to  
14:13:29 7 validate the method.

14:13:30 8 MR. RIVKIN: But if COFRAC  
14:13:32 9 did accredit it, then doesn't that mean  
14:13:35 10 that they did feel that they had seen  
14:13:37 11 enough of the testing? I'm just trying  
14:13:39 12 to figure how this fits together.

14:13:43 13 MR. SUH: You raise an  
14:13:44 14 interesting question. I mean if the  
14:13:46 15 COFRAC auditor looked at the evidence  
14:13:51 16 and it was clearly insufficient we  
14:13:55 17 think that, we believe that that  
14:13:57 18 accreditation status should be  
14:13:59 19 disregarded on the evidence here  
14:14:01 20 because there is insufficient -- there  
14:14:02 21 is by definition insufficient evidence  
14:14:05 22 to have been evaluated to accredit it.

14:14:11 23 The other two points on this  
14:14:13 24 list, that M-AN-52 is not listed on the  
14:14:18 25 accreditation documents, and the 20

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14:14:20 2 percent uncertainty listed on the  
14:14:22 3 accreditation document I believe are  
14:14:24 4 well covered in the briefs and the  
14:14:26 5 declarations.

14:14:26 6 I will say that it's  
14:14:28 7 important for us to recall when -- we  
14:14:30 8 didn't really have the time to cross  
14:14:31 9 examine Mr. Leguy, but it is important  
14:14:34 10 to note, first of all, he wasn't the  
14:14:36 11 auditor. He doesn't -- his letter is  
14:14:40 12 very carefully written and I would  
14:14:42 13 encourage the panel to read it  
14:14:43 14 carefully. He claims instead of four  
14:14:45 15 -- instead what things must have been  
14:14:48 16 and not in fact what he remembers  
14:14:49 17 occurring.

14:14:50 18 And when you -- when you  
14:14:52 19 consider the weight of that letter  
14:14:53 20 versus the weight of the testimony that  
14:14:55 21 we have of the person who was actually  
14:14:57 22 there and what she knew, we feel that  
14:15:00 23 the weight very strongly weighs in  
14:15:02 24 favor of finding that it was not  
14:15:05 25 accredited.

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14:15:05 2 Let's talk a little bit  
14:15:11 3 about the internal standard and why it  
14:15:14 4 is so important. The internal standard  
14:15:18 5 is 5-alpha androstanol AC is the  
14:15:22 6 isotopic value of the internal standard  
14:15:24 7 is used to measure the accuracy of an  
14:15:26 8 IRMS instrument during the analysis and  
14:15:28 9 we believe that LNDD should be held to  
14:15:31 10 its discovery response that was first  
14:15:34 11 served upon us in which it was clear  
14:15:36 12 that that sample was -- that the  
14:15:39 13 internal standard was injected into  
14:15:41 14 each sample to measure as an indicator  
14:15:43 15 of reliability.

14:15:44 16 This is such an important  
14:15:48 17 point for us. I don't -- I want --  
14:15:51 18 it's an important point both in the  
14:15:53 19 sense of its substantive value which is  
14:15:55 20 that it is a way to measure accuracy of  
14:15:58 21 an instrument which is what we're  
14:16:00 22 really talking about here. And  
14:16:01 23 secondly, it is -- it weighs so  
14:16:06 24 heavily, bears so heavily on the  
14:16:08 25 credibility issues that I think have

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14:16:10 2 been raised during the course of this  
14:16:11 3 proceeding.

14:16:11 4 The internal standard also  
14:16:19 5 acts as a retention time marker. I  
14:16:21 6 know we've talked a lot about that. I  
14:16:23 7 think that issue is well covered in the  
14:16:24 8 briefs. I didn't want to ignore that.  
14:16:26 9 But if you were to conduct a GC/MS,  
14:16:29 10 GC/C/IRMS analysis you would use the  
14:16:32 11 internal standard. You would also use  
14:16:33 12 it for other different kinds of  
14:16:35 13 retention time and relative retention  
14:16:38 14 time analyses that you may have heard  
14:16:39 15 about.

14:16:39 16 As the panel is aware we've  
14:16:42 17 heard a lot of theories of the way to  
14:16:44 18 use the anchor. You can use it as an  
14:16:46 19 anchor supposedly for peak pattern  
14:16:48 20 matching, you can use it as an anchor  
14:16:49 21 to compare against other target  
14:16:52 22 metabolites, you can use it to compare  
14:16:54 23 your Mix Cal Acetate. We can go on and  
14:16:56 24 on and we will cover those in our  
14:16:58 25 closing brief.

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14:16:59 2 But it is clearly also to  
14:17:02 3 our minds used as LNDD said, as a  
14:17:07 4 quality control measure. It is what  
14:17:09 5 Dr. Brenna testified about below, and  
14:17:13 6 it's interesting to see in this  
14:17:15 7 testimony here why he thought that was.  
14:17:18 8 And his testimony was he basically spot  
14:17:21 9 checked some of the values and they  
14:17:22 10 were all within range. And that  
14:17:24 11 further, that within his own laboratory  
14:17:27 12 he is familiar with the process of  
14:17:29 13 using the internal standard in samples  
14:17:35 14 as a quality control.

14:17:36 15 The total picture given, the  
14:17:39 16 way it's used, and the other facts  
14:17:45 17 which I'll talk about in a minute, make  
14:17:48 18 it entirely -- establish I think that  
14:17:51 19 the internal standard was used for  
14:17:52 20 quality control.

14:17:53 21 But nonetheless, we heard a  
14:17:55 22 lot of testimony and there's a lot of  
14:17:58 23 statements in the declarations that  
14:17:59 24 they don't use the internal standard as  
14:18:01 25 a quality control. And basically we

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14:18:04 2 heard from Dr. Brenna that he changed  
14:18:06 3 his mind based upon a review of the  
14:18:08 4 very same documents that he reviewed to  
14:18:10 5 determine that it had fallen -- that it  
14:18:13 6 had been used as a quality control, but  
14:18:16 7 I think most troublingly throughout the  
14:18:18 8 course of this hearing Dr. Matthews  
14:18:21 9 told you how he learned that the  
14:18:24 10 internal standard was supposedly not  
14:18:27 11 used as a quality control.

14:18:28 12 And that was because Larry  
14:18:32 13 Bowers, who is USADA's scientist, had  
14:18:35 14 told him that that was the case three  
14:18:38 15 weeks before he testified here.

14:18:41 16 I'm not sure -- I mean there  
14:18:48 17 are not many times that this kind of  
14:18:51 18 thing happens I think in litigation.  
14:18:54 19 It is to me, I think it is deeply  
14:18:57 20 troubling that a party opponent would  
14:19:00 21 submit discovery response about an  
14:19:04 22 internal standard being used one way  
14:19:06 23 and an intervening set of facts that  
14:19:09 24 show that the internal standard was  
14:19:10 25 found to be out of measure which bears



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14:19:12 2 on the accuracy of the test results,  
14:19:14 3 and then to have a conversation or  
14:19:16 4 instruction or discussion with the  
14:19:19 5 party opponent and the witness that it  
14:19:22 6 was used for a different purpose and to  
14:19:23 7 have that different purpose be made  
14:19:26 8 part of testimony or evidence.

14:19:29 9 But in any case, I think  
14:19:32 10 there is, as I've said, substantial  
14:19:36 11 evidence aside from the discovery  
14:19:38 12 response, that internal standard is  
14:19:41 13 used as a quality control within the  
14:19:42 14 samples.

14:19:44 15 First of all, I mean within  
14:19:47 16 the samples they manually integrate the  
14:19:51 17 internal standard. Now, manual  
14:19:55 18 integration is, as the technicians have  
14:19:57 19 described, it's a process that occurs  
14:19:59 20 when you are attempting to resolve poor  
14:20:09 21 chromatographic issues. Manual  
14:20:10 22 integration helps you determine with  
14:20:12 23 greater accuracy isotopic value. If  
14:20:15 24 you are simply using it as a marker,  
14:20:17 25 which is what the -- what the

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14:20:19 2 declarations that have been submitted  
14:20:21 3 in this case now say, there would be no  
14:20:23 4 reason to care about what the isotopic  
14:20:26 5 value is. No reason. Because the  
14:20:29 6 testimony was that that internal  
14:20:30 7 standard is being set at 870 seconds  
14:20:34 8 plus or minus 10 seconds. We'll submit  
14:20:37 9 in our brief a chart that shows you  
14:20:39 10 that even their values fall outside of  
14:20:42 11 that 870 plus or minus 10 and even that  
14:20:45 12 doesn't really make sense because there  
14:20:47 13 are values that are in between 870 plus  
14:20:49 14 or minus 10 which would make it  
14:20:51 15 difficult for you to identify the  
14:20:53 16 internal standard.

14:20:54 17 But leaving that issue  
14:20:55 18 aside, I just wanted to footnote that  
14:20:57 19 for you, that the internal standard is  
14:21:01 20 manually processed. And frankly, those  
14:21:05 21 values were recorded on pages within  
14:21:08 22 the doc pack, on the carbon isotope  
14:21:12 23 ratio summary worksheets and they were  
14:21:14 24 signed off on.

14:21:16 25 And, you know, when you look

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14:21:18 2 at the total picture of them meeting a  
14:21:20 3 quality control within the sample, that  
14:21:23 4 the discovery response pretty much, if  
14:21:25 5 you read it, it will say it was added  
14:21:27 6 to every sample as a quality control,  
14:21:29 7 and the fact that they record, measure  
14:21:33 8 and take their same procedures to  
14:21:36 9 determine isotopic value, there is  
14:21:38 10 abundant evidence that that is exactly  
14:21:41 11 the purpose that it's used for.

14:21:42 12 And I hope the panel is  
14:21:44 13 aware of the significance of this issue  
14:21:47 14 because the significance of this issue  
14:21:49 15 is that if some of the samples -- if  
14:21:53 16 the IRMS instrument in this case cannot  
14:21:56 17 properly identify isotopic value within  
14:21:59 18 the samples then it casts doubt upon  
14:22:02 19 the reliability of the remainder of the  
14:22:03 20 samples which is one of the reasons we  
14:22:05 21 believe that there is now kind of a new  
14:22:10 22 assertion that you only have to look at  
14:22:13 23 the back end of your F3 sample because  
14:22:16 24 the front end doesn't look so good  
14:22:19 25 anymore, so just look at the back end.

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14:22:21 2 They don't want you to look at the  
14:22:22 3 front end because there's  
14:22:26 4 chromatographic problems and you can't  
14:22:28 5 measure the isotopic value of the  
14:22:30 6 internal standard.

14:22:32 7 So it all makes sense the  
14:22:36 8 reason why this series of stories would  
14:22:39 9 have been presented to us. The  
14:22:40 10 question really is the lack of  
14:22:41 11 believability of those stories.

14:22:43 12 And frankly, as we go on, I  
14:22:45 13 mean one of the problems with story  
14:22:48 14 upon story is that eventually there  
14:22:51 15 comes a point where one of them doesn't  
14:22:53 16 hang together and I think we showed Dr.  
14:22:55 17 Brenna one of his points. I want to  
14:22:56 18 make sure the panel is aware of this.  
14:22:58 19 If you look at USADA 164, it is the  
14:23:01 20 blank F2 chromatograph. And in the  
14:23:09 21 blank F2 basically I think you'll  
14:23:12 22 recall I asked Dr. Brenna about this  
14:23:15 23 one, this is that internal standard  
14:23:17 24 said 29.94, it is the one that Dr.  
14:23:20 25 Brenna was pointing out was just a

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14:23:22 2 little bit outside of the measurement  
14:23:24 3 of error, but this blank does not have  
14:23:26 4 the same chromatographic problems that  
14:23:30 5 we've seen in the other fractions as an  
14:23:34 6 explanation for why they couldn't get  
14:23:36 7 the accuracy right. I mean that's the  
14:23:39 8 story, right, that you can't -- it  
14:23:41 9 doesn't matter that you can't get the  
14:23:42 10 isotopic value of the internal standard  
14:23:44 11 in the samples because there's matrix  
14:23:46 12 interference. That's what Cynthia  
14:23:49 13 Mongongu says.

14:23:50 14 Here is an example of an  
14:23:52 15 internal standard that is without  
14:23:54 16 matrix interference or without  
14:23:57 17 substantial matrix interference we can  
14:23:59 18 see at least and it is out of the  
14:24:00 19 measurement of error.

14:24:01 20 So what does that tell you  
14:24:03 21 about the accuracy of the instrument?  
14:24:05 22 And while I'm on this point let me just  
14:24:07 23 say this one other thing. Even if you  
14:24:11 24 use the internal standard only as a  
14:24:13 25 retention time marker, let's assume

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14:24:15 2 that that's true for a minute, that  
14:24:17 3 does not mean that the value that it  
14:24:22 4 obtains, that it's a value, that the  
14:24:25 5 machine somehow stops trying to  
14:24:27 6 identify the proper isotopic value of.

14:24:31 7 That didn't come out that  
14:24:32 8 clearly. Let me try again.

14:24:33 9 I mean, all right, you put  
14:24:35 10 the -- you set the internal standard at  
14:24:37 11 870 seconds, all right. And you run  
14:24:40 12 your analysis. All right. And let's  
14:24:43 13 say you only use it as a retention time  
14:24:45 14 marker. That doesn't mean that the  
14:24:48 15 instrument is not measuring isotopic  
14:24:51 16 value. The IRMS instrument doesn't  
14:24:54 17 sort of shut off and say okay well, the  
14:24:56 18 technician is using it for this  
14:24:58 19 purpose, so the machine makes the  
14:24:59 20 decision not to measure isotopic value  
14:25:02 21 accurately. It is doing what it does,  
14:25:04 22 it's a machine. In fact, we know the  
14:25:07 23 technician is manually integrating it,  
14:25:09 24 just like the technician is manually  
14:25:12 25 integrating the other peaks.

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14:25:13 2 And if that's all true,  
14:25:15 3 whether or not it is being used as a  
14:25:17 4 quality control or not, whether or not  
14:25:18 5 it is used as a quality control or not,  
14:25:20 6 it tells you that the instrument is not  
14:25:23 7 accurate. And that's the fundamental  
14:25:26 8 point here, that this explanation that  
14:25:31 9 we don't use it for this purpose is  
14:25:33 10 really in many ways irrelevant. Who  
14:25:36 11 cares what purpose you use it for. You  
14:25:37 12 put the internal standard in there,  
14:25:39 13 you've manually integrated it, you  
14:25:41 14 subjected it to the same procedures  
14:25:43 15 that you've subjected the rest of your  
14:25:44 16 peaks to and yet your instrument is not  
14:25:47 17 identifying the isotopic value  
14:25:49 18 properly. So assume it's true that  
14:25:51 19 they don't use it for that. Still, the  
14:25:52 20 fact that the internal standard is out  
14:25:55 21 on four occasions in the A run and the  
14:25:57 22 B run should give the panel substantial  
14:26:01 23 doubt, substantial doubt about the  
14:26:04 24 accuracy of the instrument.

14:26:05 25 And of course that would

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14:26:11 2 impact the panel's finding with respect  
14:26:12 3 to comfortable satisfaction of the  
14:26:16 4 result.

14:26:16 5 Let me -- I'm going to spend  
14:26:18 6 one minute on this Eurofins issue and  
14:26:22 7 again, we didn't have time to cross  
14:26:24 8 examine everybody we wanted to, but if  
14:26:26 9 we had we would have showed you the  
14:26:28 10 following. Todd, could you put up the  
14:26:31 11 top of RD 3.20: If you look at the top  
14:26:42 12 of this what you'll see is a discussion  
14:26:44 13 by Dr. Buisson about the quality  
14:26:48 14 controls in this case. And in the  
14:26:50 15 quality controls it says, again, at  
14:26:52 16 least at the very top there it says at  
14:26:54 17 least three of the four steroids  
14:26:56 18 injected must show an isotopic  
14:26:59 19 deviation within the interval Eurofins  
14:27:02 20 value plus or minus .5 delta units.

14:27:07 21 First of all, as we've seen  
14:27:07 22 from the form, the Eurofins value is  
14:27:10 23 plus or minus .3 delta units. We've  
14:27:13 24 heard a lot of testimony about whether  
14:27:15 25 or not you multiply it or you apply one



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14:27:19 2 or two.

14:27:20 3 All we can go off is not  
14:27:21 4 some theoretical explanation of what is  
14:27:24 5 occurring, but what the lab technicians  
14:27:26 6 are doing. And if the lab technicians  
14:27:29 7 believed that the Eurofins value was  
14:27:30 8 plus or minus .5 delta units, they're  
14:27:34 9 wrong, it's plus or minus .3. And the  
14:27:37 10 interesting thing about this is when  
14:27:38 11 you apply --

14:27:39 12 MR. RIVKIN: The way I  
14:27:40 13 understood the document was Eurofins  
14:27:41 14 was saying that it believes that its  
14:27:46 15 value is 16.3 plus or minus .3 and what  
14:27:50 16 the lab says is we adjust for the  
14:27:55 17 deviation so that we have to measure it  
14:28:04 18 within plus or minus .5 delta units to  
14:28:08 19 know whether we're making it work all  
14:28:11 20 right. Isn't there a difference  
14:28:12 21 between the lab number and the Eurofins  
14:28:14 22 number?

14:28:14 23 MR. SUH: I believe we've  
14:28:16 24 heard expert testimony to that effect.  
14:28:18 25 Our point is that when you look at what

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14:28:20 2 LNDD believes they appear to be  
14:28:24 3 applying what they believe is Eurofins'  
14:28:26 4 measurement of error and the Eurofins  
14:28:29 5 value is not -- we don't see plus or  
14:28:31 6 minus .5 anywhere. And again, we  
14:28:34 7 haven't had a chance to cross that  
14:28:35 8 person, but we just wanted to point out  
14:28:40 9 this discrepancy.

14:28:40 10 And again, if, by the way,  
14:28:44 11 they did after Eurofins value in this  
14:28:47 12 declaration, if they did put plus or  
14:28:49 13 minus .3 what you would see is all of  
14:28:52 14 the etio -- the ketoetios drop out of  
14:28:55 15 the measurement of error, and you would  
14:28:57 16 see one of the etios drop out.

14:29:02 17 So it's not a big point for  
14:29:06 18 us, I know that there was a lack of  
14:29:09 19 clarity with respect to this point, but  
14:29:14 20 it is worth us pointing out to you why  
14:29:17 21 it was an issue for us in the first  
14:29:19 22 instance. And this is what it was.

14:29:20 23 Turning to the method of  
14:29:26 24 testosterone identification. First of  
14:29:28 25 all, as we've said, there's no SOP for

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14:29:30 2 peak identification method. I'd like  
14:29:36 3 to -- and I think I went over this, but  
14:29:38 4 the reality is USADA's experts really  
14:29:41 5 don't know how LNDD identifies their  
14:29:44 6 target analytes. The ones that are  
14:29:46 7 sitting on the outside. They're  
14:29:47 8 looking at the same kinds of things we  
14:29:49 9 are and they're rendering an opinion  
14:29:51 10 about what occurs and I think if you  
14:29:52 11 look at all the declarations you'll see  
14:29:54 12 substantial variation in their  
14:29:55 13 understanding of what LNDD did.

14:29:56 14 To your point, Mr. Rivkin,  
14:30:00 15 the Appellant's expert at the B testing  
14:30:04 16 was denied access to the necessary  
14:30:06 17 historical data of blank urine.

14:30:08 18 Let me explain why this is  
14:30:09 19 so important. You've seen the  
14:30:17 20 documents LNDD 309, 310 and what they  
14:30:20 21 are is supposedly, if you look at again  
14:30:24 22 Dr. Buisson's declaration, they are  
14:30:26 23 referred to as sort of the information  
14:30:29 24 about blank urine over time. And some  
14:30:32 25 of the testimony we've heard is that

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14:30:34 2 blank urine is being used to identify  
14:30:37 3 testosterone metabolites.

14:30:38 4 Throughout this discussion  
14:30:40 5 there is missing a key step, and there  
14:30:43 6 is -- I've asked Dr. Brenna, it's in  
14:30:45 7 the record, I've asked the technicians,  
14:30:49 8 that there is no evidence that there is  
14:30:52 9 a -- that they have identified the  
14:30:57 10 blank urine -- the testosterone  
14:30:58 11 metabolites in the blank urine.

14:31:00 12 In other words, if you are  
14:31:01 13 saying that -- if you are using the  
14:31:03 14 blank urine to compare against the  
14:31:04 15 sample, there has to be some way that  
14:31:06 16 you know when you say these are the  
14:31:08 17 isotopic values and information with  
14:31:11 18 the blank urine that the peaks in the  
14:31:13 19 blank urine are the peaks that you're  
14:31:14 20 truly looking at or not some other  
14:31:16 21 peaks and that's the information that's  
14:31:19 22 missing.

14:31:23 23 There's a lack of, great  
14:31:26 24 lack of clarity which is to Mix Cal  
14:31:28 25 Acetate. The experts in their

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14:31:29 2 declarations have repeatedly said that  
14:31:32 3 there's Mix Cal Acetate is used to --  
14:31:37 4 in the identification process. I  
14:31:40 5 asked, as you know, open-ended  
14:31:42 6 questions on cross about what the  
14:31:43 7 method was. And it was only until  
14:31:47 8 there was this discussion of Mix Cal  
14:31:49 9 Acetate came out of the technicians was  
14:31:54 10 by elicited by leading questions on the  
14:31:55 11 witness list, and the laboratory  
14:31:57 12 technicians, as you'll see when you  
14:31:59 13 read this, never mentioned Mix Cal  
14:32:02 14 Acetate in their declarations as a  
14:32:03 15 method or part of the way that  
14:32:04 16 testosterone metabolites are  
14:32:06 17 identified.

14:32:06 18 I think the key point for  
14:32:10 19 you to take away from this is is that  
14:32:13 20 with respect to peak identification it  
14:32:16 21 is unscientific and defies commonsense  
14:32:23 22 that you would have to have this  
14:32:25 23 literally army of experts that USADA  
14:32:28 24 has called, head of WADA labs, the  
14:32:31 25 person who supposedly, you know, people

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14:32:35 2 who have, Dr. Matthews who developed  
14:32:38 3 the IRMS instrument or other witnesses  
14:32:44 4 to come and opine about what LNDD did.  
14:32:49 5 When you compare that to other parts of  
14:32:52 6 LNDD's protocols there are SOPs on you  
14:32:55 7 can see what it is they were supposed  
14:32:57 8 to do. But here, it's still to us a  
14:33:01 9 confusing morass of what they did, how  
14:33:04 10 they did it, what steps they took and  
14:33:06 11 again, it causes us substantial concern  
14:33:12 12 and I believe strongly impacts the  
14:33:15 13 ability to say that you can say with  
14:33:19 14 comfortable satisfaction that this  
14:33:22 15 offense has been committed and the test  
14:33:25 16 results are accurate.

14:33:26 17 The most important thing,  
14:33:30 18 the most important thing I think is  
14:33:34 19 even if it were true that blank urine  
14:33:38 20 was used, and I think I know where now  
14:33:41 21 this -- the USADA is going to -- going  
14:33:45 22 to argue with respect to this, is that  
14:33:47 23 when you turn to the WADA technical  
14:33:50 24 document -- first of all, let me start  
14:33:51 25 with the WADA technical document. And

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14:33:54 2 Todd, if you could call out the piece  
14:33:55 3 in question, that first box. The  
14:34:00 4 reason why these many stories and lack  
14:34:03 5 of SOPs is such a problem is it really  
14:34:06 6 is an ISL violation. The laboratory  
14:34:10 7 must establish criteria for  
14:34:12 8 identification of a compound and  
14:34:14 9 examples of acceptable criteria are  
14:34:16 10 listed below. But that's the ISL  
14:34:20 11 requirement. You have to establish  
14:34:20 12 criteria for identification; not  
14:34:21 13 varying criteria, not Ms. Frelat does  
14:34:23 14 one thing, Ms. Mongongu does something  
14:34:25 15 else, the experts say they do something  
14:34:28 16 different, there's a different use of  
14:34:29 17 Mix Cal Acetate, there's different  
14:34:31 18 kinds of peak and pattern matching.  
14:34:33 19 That doesn't make any sense. And  
14:34:35 20 that's not what the ISL requires.  
14:34:36 21 There must be criteria.

14:34:37 22 And one of the criteria I  
14:34:39 23 believe that the blank urine has been  
14:34:40 24 identified as a reference collection,  
14:34:43 25 so I want to talk about it a little

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14:34:45 2 bit, identified by USADA as the  
14:34:47 3 reference collection is this. In a  
14:34:49 4 spiked urine sample, a reference  
14:34:52 5 collection sample, reference material  
14:34:56 6 that -- I'm getting ahead of myself  
14:34:58 7 here.

14:34:59 8 For capillary gas  
14:35:01 9 chromatography, and this is the  
14:35:02 10 provision we've seen before, the  
14:35:03 11 retention time of the analyte shall not  
14:35:06 12 differ more than one percent or two  
14:35:08 13 minutes, whichever is smaller, in a  
14:35:11 14 spiked urine sample, reference  
14:35:13 15 collection sample or reference material  
14:35:15 16 analyzed contemporaneously. And there  
14:35:17 17 has been a suggestion that blank urine  
14:35:19 18 constitutes a reference selection. I  
14:35:22 19 don't know if the panel has caught it.  
14:35:23 20 It has been part of the testimony, it  
14:35:26 21 has been woven in by USADA's witnesses  
14:35:29 22 that somehow it may be a reference  
14:35:31 23 collection. We strongly disagree for  
14:35:33 24 the following reasons.

14:35:34 25 Todd, if you could go to --



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14:35:37 2 yes, thank you. That there's a  
14:35:39 3 definition for these things. First of  
14:35:41 4 all, it's not a spiked urine sample.  
14:35:44 5 The blank urine is not a blank that has  
14:35:46 6 been spiked with testosterone, there's  
14:35:48 7 no allegation that's the case. So we  
14:35:51 8 won't consider that one. But a  
14:35:52 9 reference collection is a collection of  
14:35:55 10 samples or isolates, may be obtained  
14:35:58 11 from a biological matrix following an  
14:36:00 12 authentic and verifiable administration  
14:36:02 13 of a prohibited substance or method  
14:36:04 14 providing that the analytical data are  
14:36:06 15 sufficient to justify the identity of  
14:36:07 16 the relevant chromatography or isolate  
14:36:11 17 as a prohibited substance. I mean the  
14:36:15 18 chief part is "providing that the  
14:36:17 19 analytical data are sufficient just to  
14:36:19 20 justify the identity." And that is why  
14:36:23 21 I asked whether or not there is any  
14:36:25 22 identification information for the  
14:36:25 23 blank urine and I think the panel heard  
14:36:28 24 in the documents you've seen, no.

14:36:30 25 So there is no established

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14:36:31 2 identification information with respect  
14:36:33 3 to reference collection.

14:36:35 4 And then the reference  
14:36:40 5 material, blank urine is also not a  
14:36:42 6 reference material, it's a material or  
14:36:44 7 substance one or more of whose  
14:36:46 8 properties are sufficiently homogeneous  
14:36:49 9 and well established to be used for the  
14:36:51 10 calibration of an apparatus, the  
14:36:53 11 assessment of a measurement method or  
14:36:55 12 for assigning values. Again, no  
14:36:57 13 identification information, it doesn't  
14:36:59 14 meet this requirement either.

14:37:00 15 You know, the next slide I  
14:37:02 16 would bring up, and I would give the  
14:37:04 17 panel this caveat, we did look over the  
14:37:09 18 testimony at length to try to represent  
14:37:14 19 to the panel, both the testimony  
14:37:16 20 elicited on cross and direct, what is  
14:37:18 21 the method. And we really did focus on  
14:37:21 22 the two technicians because they are  
14:37:22 23 the two technicians that performed any  
14:37:24 24 of the tests.

14:37:27 25 When we looked at Ms.

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14:37:28 2 Mongongu, here is what we believe her  
14:37:31 3 testimony represents. First of all,  
14:37:33 4 step 1, that there's a pattern matching  
14:37:36 5 between the GC/MS blank urine and the  
14:37:39 6 GC/C/IRMS blank urine. And once that  
14:37:42 7 pattern is established so that the  
14:37:44 8 pattern is used to identify the  
14:37:45 9 metabolites in the GC/C/IRMS, then  
14:37:49 10 retention time and relative retention  
14:37:51 11 time are then used against the sample  
14:37:53 12 of the GC/C/IRMS. So the way the  
14:37:56 13 metabolites are established in the box  
14:38:01 14 at the bottom of step 1 is that you've  
14:38:03 15 pattern matched the blank urine.

14:38:05 16 You'll see in the transcript  
14:38:06 17 there's also times when she was  
14:38:07 18 referring to a package or other  
14:38:09 19 information. Some of that may have  
14:38:10 20 been retention time a little bit  
14:38:12 21 between the GC/MS blank urine and the  
14:38:16 22 GC/C/IRMS blank urine which is one of  
14:38:17 23 the concerns we had when she had the  
14:38:19 24 doc pack in front of her. But be that  
14:38:22 25 as it may, we believe that this

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14:38:23 2 represents a summary of what she  
14:38:25 3 testified to.

14:38:25 4 When you look at Ms. Frelat,  
14:38:28 5 what she testified to was much more  
14:38:29 6 similar to what was in her declaration  
14:38:31 7 which is that step 1, there's a peak  
14:38:36 8 matching or attempted pre-identification  
14:38:38 9 process between the GC and the GC/C/IRMS  
14:38:41 10 and you recall that that was the instance  
14:38:44 11 when we had the two chromatograms and we  
14:38:46 12 asked her to draw the two circles around  
14:38:49 13 the two patterns. That was the GC/MS and  
14:38:51 14 the GC/C/IRMS.

14:38:52 15 The next step is then to  
14:38:54 16 confirm that using the blank urine from  
14:38:58 17 GC/C/IRMS and comparing that with the  
14:39:00 18 relative retention times against the  
14:39:02 19 studied blank urine values. The  
14:39:05 20 studied blank urine values will give  
14:39:08 21 you the identification in the blank  
14:39:10 22 urine in our actual sample. You match  
14:39:12 23 that with the retention times and the  
14:39:14 24 relative retention times in the  
14:39:16 25 GC/C/IRMS sample and there you have it.

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14:39:19 2 The key thing to take away  
14:39:20 3 from this is these two methods are  
14:39:21 4 different. And moreover, with respect  
14:39:23 5 to the studied blank urine, which is  
14:39:25 6 that far left box in the Frelat  
14:39:29 7 schematic, said that that study blank  
14:39:32 8 urine, if that is LNDD 309 and 310,  
14:39:34 9 which is what I showed her then when I  
14:39:37 10 was asking those questions, there's no  
14:39:38 11 identification information there. It  
14:39:40 12 doesn't tell you what the peaks are in  
14:39:41 13 those documents. And therefore, a key  
14:39:45 14 component of that method would be  
14:39:46 15 missing.

14:39:47 16 Let me turn to the next  
14:39:55 17 result, the next slide, really the next  
14:40:00 18 issue, rather, which is bad  
14:40:01 19 chromatography and manual integration.  
14:40:08 20 Leaving aside the conflicting testimony  
14:40:11 21 of the experts and not the technicians  
14:40:14 22 in this case, I think you heard it last  
14:40:17 23 with Ms. Ayotte, Dr. Ayotte, in which,  
14:40:24 24 you know -- you heard the technicians  
14:40:27 25 say that yes, there are portions of

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14:40:29 2 poor chromatography in the samples  
14:40:30 3 we're looking at. I think you've also  
14:40:34 4 heard Dr. Ayotte say, no, all the  
14:40:36 5 chromatograms are great. You've heard  
14:40:38 6 all sorts of things.

14:40:39 7 But focusing on what the  
14:40:40 8 technicians believed because they're  
14:40:42 9 the ones that did the tests, manual  
14:40:44 10 integration was performed because their  
14:40:47 11 chromatography was poor. And that  
14:40:48 12 makes perfect sense, it's consistent  
14:40:50 13 with the manual integration function.  
14:40:52 14 I mean if co-elution, if your peaks are  
14:40:56 15 co-eluting and you have overlap, then  
14:40:58 16 as Dr. Davis described, the manual  
14:41:00 17 integration process at least with  
14:41:02 18 respect to the IsoPrime and the OS/2  
14:41:04 19 software is a diagnostic tool. It's  
14:41:06 20 not a tool to help you adjust or fix  
14:41:09 21 bad chromatography or bad data and  
14:41:11 22 somehow move on with your same test,  
14:41:13 23 especially not repeatedly, especially  
14:41:14 24 not through your quality controls, but  
14:41:16 25 it is -- it is a -- it is a mechanism

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14:41:19 2 to figure out what's going on, adjust  
14:41:23 3 your parameters and run the sample  
14:41:25 4 again. But here are the problems with  
14:41:29 5 manual integration and I think we even  
14:41:31 6 saw it from Dr. Ayotte's testimony.  
14:41:33 7 The manual integration, there is no  
14:41:38 8 record of what was done, what the  
14:41:41 9 changing values were, no one can look  
14:41:44 10 back and say, well, this is right, this  
14:41:46 11 is wrong. I also find it particularly  
14:41:50 12 concerning that the Mix Cal Acetate and  
14:41:55 13 the Mix Cal IRMS were admittedly  
14:41:59 14 manually integrated on a consistent  
14:42:01 15 basis. Those are the quality controls  
14:42:04 16 that exist along with the internal  
14:42:06 17 standard within the sample. If manual  
14:42:09 18 integration is being performed  
14:42:11 19 consistently in the Mix Cal IRMS and  
14:42:14 20 Mix Cal Acetate, and those -- it is --  
14:42:18 21 and the values are being used -- are  
14:42:21 22 changed -- we don't know, but changed  
14:42:24 23 to fall within the measurement of  
14:42:26 24 uncertainty, the plus or minus .5  
14:42:29 25 measure of uncertainty, we have no

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14:42:31 2 assurance that the machine is accurate,  
14:42:34 3 the quality control schema has failed.  
14:42:38 4 And when you look at the Mix Cal IRMS  
14:42:41 5 if it's manually integrated all the  
14:42:43 6 figures are -- and let's be clear, it's  
14:42:45 7 the reported figures. The reported  
14:42:46 8 figures fall within the measurement of  
14:42:49 9 uncertainty. The reported figures in  
14:42:51 10 the Mix Cal Acetate fall under the  
14:42:53 11 measure of uncertainty most of the time  
14:42:54 12 if you use plus or minus .5.

14:42:56 13 And again, we would have  
14:42:59 14 gone into this more if we had had more  
14:43:01 15 time, but I wonder what would have  
14:43:03 16 happened if LNDD believed in the  
14:43:06 17 measure of uncertainties should have  
14:43:08 18 been plus or minus .3. I wonder if  
14:43:11 19 those figures also would have fallen  
14:43:13 20 within plus or minus .3. The way you  
14:43:16 21 know there is a problem is that the  
14:43:17 22 internal standards are out of  
14:43:19 23 measurement for four of the samples.

14:43:20 24 And lastly with respect to  
14:43:26 25 this process itself, and this is a



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14:43:29 2 process issue, that the technicians  
14:43:33 3 described that their process really is  
14:43:36 4 that the B sample, the B testing  
14:43:38 5 process confirms the A result. And  
14:43:41 6 that the A confirms the T/E test. And  
14:43:45 7 that Ms. Frelat had described that her  
14:43:47 8 1.5, 1.6 measurement of significant  
14:43:52 9 difference in her own mind was the  
14:43:54 10 difference in the variance as against  
14:43:55 11 the -- from the B to the A. And that  
14:43:59 12 Ms. Frelat's B test results confirmed  
14:44:02 13 Ms. Mongongu's A test result and then  
14:44:06 14 Ms. Mongongu reviewed Ms. Frelat's B  
14:44:09 15 test result.

14:44:09 16 I mean when you look at this  
14:44:13 17 process, and I'm just asking the panel  
14:44:16 18 to look at every step of this process  
14:44:19 19 along the way from the manual  
14:44:21 20 integration of the quality controls to  
14:44:24 21 the internal standard falling out of  
14:44:27 22 measurement in the samples, to the  
14:44:29 23 admitted poor chromatography within  
14:44:33 24 portions of the samples, to the fact  
14:44:34 25 that there is -- that the B technician

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14:44:40 2 is looking at the A technician and  
14:44:42 3 saying well if it falls -- the  
14:44:43 4 significant difference is about 1.5 or  
14:44:46 5 1.6 and the A is confirming the T/E, it  
14:44:51 6 ceases to be science, it ceases to be  
14:44:54 7 accurate laboratory procedures, and it  
14:44:58 8 starts to be something else.

14:45:00 9 And whatever that something  
14:45:02 10 else is, I think any COFRAC accreditor  
14:45:09 11 if he were aware of this process, which  
14:45:15 12 based upon the fact that Ms. Frelat was  
14:45:18 13 not fully validated at the time that  
14:45:21 14 the February 9 and 10 COFRAC audit took  
14:45:24 15 place, would not accredit this. And  
14:45:28 16 this should not be rewarded at this  
14:45:32 17 juncture. This should not be rewarded.  
14:45:35 18 It is a -- it is a series of failures  
14:45:37 19 of what the laboratory had originally  
14:45:39 20 set out to do on a step-by-step basis.

14:45:42 21 MR. PAULSSON: Why should we  
14:45:43 22 give weight to the 1.5, 1.6?

14:45:48 23 MR. SUH: I think we would  
14:45:49 24 give weight to it because that's what  
14:45:51 25 Ms. Frelat testified in her own mind

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14:45:53 2 was a significant difference when she  
14:45:55 3 conducted her analysis.

14:45:57 4 MR. PAULSSON: We also heard  
14:45:59 5 her explanation.

14:46:00 6 MR. SUH: We did. And I  
14:46:02 7 believe her explanation -- well, her  
14:46:04 8 explanation below was that when she was  
14:46:06 9 looking at the manual integration she  
14:46:07 10 was -- she thought a significant  
14:46:09 11 difference when she says manually  
14:46:11 12 integrating was 1.5 to 1.6 delta/delta  
14:46:14 13 value and she changed her statement  
14:46:17 14 about what that really meant and that  
14:46:19 15 that was -- and I believe the panel can  
14:46:24 16 read the transcript in the review  
14:46:29 17 process. But I think we give weight to  
14:46:32 18 it not because it's an accurate  
14:46:34 19 scientific method but because it shows  
14:46:36 20 subjectivity and a subjectivity that's  
14:46:38 21 not contained in any document at LNDD.

14:46:40 22 I'd like to show this one  
14:46:44 23 exhibit, GDC 1350, I know we've seen  
14:46:47 24 this before, but I did want to repeat a  
14:46:52 25 couple of points about this and

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14:46:54 2 emphasize a couple of points.

14:46:56 3 Number 1, first of all, I

14:46:58 4 know some questions have been directed

14:46:59 5 toward the function of Dr. Botre.

14:47:02 6 Dr. Botre was present as the panel's

14:47:04 7 expert, as the person who was

14:47:07 8 overseeing this process. He didn't

14:47:08 9 actually do the reprocessing. If you

14:47:11 10 look at the records, the pleadings

14:47:13 11 below, what occurred was the LNDD

14:47:15 12 technicians did the reprocessing. They

14:47:17 13 were the ones that were repeating their

14:47:20 14 method. So when we say that the manual

14:47:22 15 processing results in column 1 and

14:47:25 16 column 3 are varying such that the

14:47:30 17 final isotopic values are not reliable,

14:47:33 18 we're not saying that Dr. Botre was

14:47:35 19 sitting there operating this. Dr.

14:47:37 20 Botre didn't have anymore familiarity

14:47:38 21 with the OS/2 software IsoPrime

14:47:42 22 instrument than anyone else has had in

14:47:44 23 this case. We had technicians doing

14:47:46 24 it. And that was exactly our point.

14:47:48 25 That when they were

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14:47:50 2 reprocessing the results, and it's in  
14:47:52 3 the testimony below, they had to do it  
14:47:56 4 on a multiple number of occasions to  
14:47:58 5 get even the reported delta/delta  
14:48:00 6 values that are here.

14:48:01 7 And when you get the  
14:48:03 8 reported delta/delta values that are  
14:48:05 9 here, you have -- there's far too great  
14:48:09 10 a level of swing. I mean if these  
14:48:13 11 values were all within the measure of  
14:48:16 12 uncertainty, .8, that would be at a  
14:48:20 13 colorable argument that the data was  
14:48:22 14 reliable enough and that you were  
14:48:24 15 falling within, you know, .8 within  
14:48:27 16 your laboratory's own procedures,  
14:48:29 17 that's what we would see if it were  
14:48:31 18 truly a quality control measure. That,  
14:48:34 19 look, we had our first reprocessing  
14:48:36 20 result minus 2, and then we run it  
14:48:38 21 again and it's minus 2.4 and we run it  
14:48:41 22 again it's minus 2.2. We run it again,  
14:48:44 23 and it is falling within .8.

14:48:47 24 But what we see here is  
14:48:48 25 values that are falling far outside of

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14:48:51 2 the .8 measure of uncertainty. We see  
14:48:56 3 things as troubling as the fact that in  
14:48:58 4 the automatic processing column you see  
14:49:01 5 the values exceed minus 3, although not  
14:49:05 6 applying the measurement of certainty,  
14:49:07 7 that blank urine sample is technically  
14:49:09 8 -- without applying the measurement of  
14:49:12 9 uncertainty it's showing a positive for  
14:49:15 10 exogenous testosterone. I mean this  
14:49:17 11 data is a mess. And the reality is for  
14:49:21 12 the IsoPrime instrument manual  
14:49:25 13 integration doesn't fix it. It just  
14:49:28 14 doesn't fix it. And it renders it  
14:49:30 15 unreliable.

14:49:30 16 MR. RIVKIN: Why does one  
14:49:33 17 conclude from this that the data is a  
14:49:35 18 mess rather than that the software  
14:49:40 19 doesn't work so well which is why the  
14:49:43 20 two -- the two higher numbers for the  
14:49:49 21 5-alpha are outside of the three, the  
14:49:52 22 range of three only where the software  
14:49:55 23 had to do it by itself? Why couldn't  
14:49:58 24 one --

14:49:58 25 MR. SUH: I'm sorry, I don't

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14:49:59 2 think I catch your question.

14:50:01 3 MR. RIVKIN: You said that  
14:50:02 4 the fact that the blank urine shows for  
14:50:07 5 5-alpha what is effectively a positive  
14:50:10 6 AAF shows that the data is a mess.  
14:50:15 7 Couldn't one equally draw a conclusion  
14:50:17 8 from this chart that because those two  
14:50:21 9 numbers come from the software only  
14:50:27 10 determination, that in fact it proves  
14:50:30 11 what various people testified for  
14:50:33 12 USADA, that you can't just rely on the  
14:50:36 13 software, that you must do some manual  
14:50:37 14 integration in order to come up with an  
14:50:39 15 accurate number?

14:50:40 16 MR. SUH: And I think the  
14:50:42 17 answer to that question is no. And the  
14:50:44 18 reason why it is no is that when you  
14:50:46 19 look at the chromatograms in this case  
14:50:50 20 you see the fact that they themselves  
14:50:53 21 have the same problems we're talking  
14:50:55 22 about. You have evidence of poor  
14:50:57 23 chromatography.

14:50:58 24 And, you know, to draw a  
14:51:02 25 very rough chromatogram, if you have an

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14:51:07 2 issue where you have co-eluting peaks,  
14:51:11 3 something like this, whether --  
14:51:15 4 automatic software is going to have  
14:51:18 5 problems identifying, say, the start  
14:51:20 6 and stop of a particular peak.

14:51:24 7 But the reason why the  
14:51:26 8 chromatogram looks like this is that is  
14:51:28 9 the data representation coming off of  
14:51:31 10 your mass spectrometer in your IRMS  
14:51:34 11 instrument. This is what's going off.  
14:51:37 12 Whether or not this is because these  
14:51:39 13 peaks are because of poor sample  
14:51:41 14 preparation, or because there are --  
14:51:43 15 there are other substances in here, we  
14:51:47 16 don't know. We don't know what these  
14:51:48 17 substances are. Because we've had this  
14:51:51 18 discussion about the linearity with  
14:51:55 19 Dr. De Boer needing to be measured  
14:51:59 20 within a narrow band. We don't know  
14:52:01 21 what the isotopic value of these peaks  
14:52:04 22 are. And they are co-eluted.

14:52:07 23 And when they are co-eluted,  
14:52:09 24 the automatic software, automatic  
14:52:11 25 feature, nor the manual -- or manual



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14:52:14 2 processing is going to fix this  
14:52:17 3 problem. This is not a fixable problem  
14:52:19 4 in the way that -- it won't fix poor  
14:52:25 5 data. Because this is the  
14:52:27 6 representation of the data.

14:52:28 7 Turning to chain of custody.  
14:52:36 8 We're really going to focus on just the  
14:52:43 9 one break in the chain of custody we  
14:52:46 10 focused on with respect to the  
14:52:48 11 witnesses and I think this is  
14:52:49 12 relatively fresh in the panel's mind,  
14:52:51 13 but this is the 1590, 1591 issue. I  
14:52:57 14 think the evidence from the witnesses  
14:52:58 15 we would submit is the one thing they  
14:53:00 16 are clear about is that they are not  
14:53:02 17 clear and that they don't remember, and  
14:53:04 18 in particular, I think everyone was  
14:53:07 19 troubled today about the fact that Ms.  
14:53:09 20 Garcia who was the witness who would  
14:53:10 21 testify about the resolution of the  
14:53:12 22 problem in her rebuttal declaration  
14:53:14 23 where she admitted the two mistakes,  
14:53:16 24 that she doesn't even appear to  
14:53:19 25 remember writing the rebuttal

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14:53:21 2 declaration. She didn't appear to  
14:53:23 3 remember for a long time. And frankly,  
14:53:25 4 I think we raised a substantial issue  
14:53:29 5 as to whether or not she would be able  
14:53:30 6 to remember anything at all. Given  
14:53:32 7 that supposedly that declaration was  
14:53:34 8 drafted only two or three weeks ago,  
14:53:38 9 how would she possibly remember  
14:53:39 10 anything that occurred two years ago.

14:53:41 11 So with that I think given  
14:53:43 12 the time, I will move on.

14:53:46 13 I did want to spend a little  
14:53:53 14 time on the different columns issue and  
14:53:57 15 to walk the panel through the different  
14:53:59 16 columns issue.

14:54:00 17 First of all, the SOP  
14:54:02 18 requires that the same column be used.  
14:54:06 19 And the failure to use the same column,  
14:54:09 20 I mean the reason why it's such a big  
14:54:11 21 issue is it may result in a failure to  
14:54:13 22 properly identify our target analytes.  
14:54:16 23 The panel of course remembers the  
14:54:18 24 column we're talking about, it looks  
14:54:19 25 like this, and the issue has been

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14:54:21 2 whether or not it should be the same in  
14:54:24 3 the GC/MS and the IRMS issue. The  
14:54:27 4 laboratory doc pack establishes or says  
14:54:30 5 that different columns were used. What  
14:54:32 6 really brought this issue to our  
14:54:33 7 attention is that the AAA panel  
14:54:35 8 concluded without any evidence at all,  
14:54:37 9 we don't know how they came to this  
14:54:39 10 conclusion, that the columns were in  
14:54:40 11 fact the same. And that USADA has  
14:54:43 12 asserted the columns were the same.  
14:54:45 13 Just to walk the panel through this  
14:54:47 14 column issue from the testimony, Ms.  
14:54:52 15 Mongongu doesn't remember the changing  
14:54:53 16 of the columns. Mr. Le Petit doesn't  
14:54:57 17 remember.

14:54:57 18 There's a lot of expert  
14:54:59 19 supposition. I think the key expert  
14:55:02 20 conclusion about this is from Dr.  
14:55:04 21 Brenna, that he ran some experiment,  
14:55:05 22 that even if you use the same columns  
14:55:08 23 the metabolites were eluting in the  
14:55:10 24 same order. I've got to say if that --  
14:55:13 25 if that were so dispositive he would

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14:55:15 2 have, I think he should have included  
14:55:20 3 the underlying data. It was really  
14:55:22 4 just a few lines to resolve what is  
14:55:24 5 really a complex issue here for us.

14:55:26 6 I think the thing that we  
14:55:28 7 take away from the column issue is  
14:55:30 8 this: Is the column maintenance log,  
14:55:34 9 and we submit to you that it bears an  
14:55:38 10 indicia of falsity in that the column  
14:55:42 11 log as it is supposed to be maintained  
14:55:45 12 contemporaneously, per the testimony of  
14:55:48 13 Ms. Frelat, and that the entries are  
14:55:51 14 supposed to go in date order, in order  
14:55:53 15 that they occurred, simultaneously  
14:55:55 16 transmitted to the column maintenance  
14:55:58 17 log and you see a 10 day switch in the  
14:56:02 18 row, the two rows above the row which  
14:56:05 19 establishes that the column was  
14:56:06 20 changed.

14:56:07 21 I've got to say it gives me  
14:56:12 22 no great pleasure to say these things,  
14:56:15 23 it really doesn't. I assure the panel  
14:56:19 24 we did not start out this case long ago  
14:56:21 25 thinking that things that we would

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14:56:23 2 receive from the discovery would be  
14:56:26 3 inaccurate or false. I think we have a  
14:56:31 4 justified suspicion that the document  
14:56:35 5 that supposedly establishes the column  
14:56:37 6 change in this case, this is the one  
14:56:39 7 which is supposedly simultaneously  
14:56:41 8 prepared, the entries are switched.

14:56:43 9 And to give the panel some  
14:56:47 10 background on this, this isn't the  
14:56:49 11 first time this has happened to us, as  
14:56:51 12 the panel is aware from briefing. If  
14:56:53 13 you look at the next document, which is  
14:56:56 14 the reference solution log, this is the  
14:56:58 15 document that we received and on the  
14:57:01 16 right-hand side you'll see that there  
14:57:02 17 were these cross-outs and we pointed  
14:57:05 18 this out as being a manufactured  
14:57:06 19 document. It is supposed to be  
14:57:09 20 simultaneously maintained, it is  
14:57:11 21 supposed to be contemporaneously  
14:57:13 22 maintained, and when we looked at one  
14:57:15 23 of the entries there was this  
14:57:16 24 correction from the date of 2006 to  
14:57:21 25 2007.

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14:57:22 2 Now this document was  
14:57:23 3 supposed to be prepared in 2006. We  
14:57:25 4 all were looking at the document and we  
14:57:27 5 looked at each other and said, look, in  
14:57:29 6 March of 2006 who writes the next year.  
14:57:32 7 Who does that? If you were -- in the  
14:57:35 8 beginning of the year if you're going  
14:57:36 9 to write the wrong year date at least  
14:57:38 10 for me I write the previous year. I  
14:57:40 11 would write March 2005. But we saw  
14:57:43 12 this correction that said March 2006.  
14:57:45 13 And given the fact that it's supposed  
14:57:47 14 to be simultaneously maintained and all  
14:57:49 15 the handwriting looks the same, we  
14:57:52 16 didn't believe it was an accurate  
14:57:53 17 document. And we turned out to be  
14:57:55 18 right.

14:57:55 19 We were told this document  
14:57:56 20 is a summary of another document, which  
14:57:58 21 is the next page here, and this  
14:58:00 22 document actually when we look at this,  
14:58:04 23 there's an observation on that line at  
14:58:07 24 the top that this copy conforms to the  
14:58:08 25 original. So this document which

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14:58:13 2 supposedly the previous document was  
14:58:15 3 copied from is a copy of another  
14:58:17 4 original. And we've never seen that  
14:58:20 5 original.

14:58:20 6 A reference solution was an  
14:58:25 7 issue before it's really no longer now.  
14:58:29 8 But the purpose of us explaining these  
14:58:32 9 things to you is to explain that when  
14:58:35 10 we see something like the column  
14:58:39 11 maintenance log with entries  
14:58:41 12 immediately above the column change at  
14:58:47 13 issue, we do have a basis to believe  
14:58:50 14 that it is not a credible document and  
14:58:52 15 we would submit to the panel that the  
14:58:54 16 panel has that same basis having seen  
14:58:56 17 the evidence before it.

14:58:57 18 I am going to, given the  
14:59:01 19 time again, speed through these last  
14:59:05 20 few points. If you could look at --  
14:59:08 21 Todd turn to the inconsistent retesting  
14:59:10 22 results just to review this one more  
14:59:13 23 time. Again, very little has been said  
14:59:16 24 about the four other IRMS test results,  
14:59:19 25 and I think that's very instructive

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14:59:21 2 because what that tells us is John  
14:59:29 3 Amory was right, John Amory's  
14:59:31 4 conclusion was right. When you look at  
14:59:35 5 the total picture here of the  
14:59:36 6 supposedly positive IRMS results as  
14:59:38 7 against these negative T/E results and  
14:59:40 8 the way that they go from day to day,  
14:59:44 9 that this does, to him, when he looks  
14:59:46 10 at the peer-reviewed literature, is  
14:59:50 11 inconsistent with the peer-reviewed  
14:59:52 12 literature and the weight of the  
14:59:54 13 peer-reviewed literature and the fact  
14:59:55 14 that these have, these other four tests  
14:59:58 15 are no longer apparently at least a  
15:00:01 16 substantial issue asserted by USADA, I  
15:00:03 17 think is the best evidence that  
15:00:05 18 Dr. Amory's conclusions are correct.

15:00:08 19 I'm going to just turn to  
15:00:12 20 one last thing and that's linearity.  
15:00:17 21 Linearity -- linearity is the ability  
15:00:23 22 of the instrument to accurately  
15:00:25 23 determine isotopic value over different  
15:00:28 24 concentration of the target substance.

15:00:31 25 What this basically means is



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15:00:35 2 that the instrument can accurately  
15:00:38 3 measure isotopic value for the little  
15:00:41 4 peaks as well as the peaks that are at  
15:00:45 5 issue. And the reason why this is  
15:00:48 6 again of importance to us is that the  
15:00:49 7 SOP requires the linearity test be run  
15:00:53 8 every month. In discovery we were  
15:00:55 9 provided only with June, July and  
15:00:57 10 September. We were told there was no  
15:00:59 11 August linearity test. The AAA panel  
15:01:02 12 decision faulted USADA, or at least  
15:01:06 13 LNDD, and declared an ISL violation for  
15:01:10 14 failure to follow that SOP.

15:01:14 15 What troubled us was really  
15:01:16 16 the production of the August linearity  
15:01:18 17 paper, and there are two things that I  
15:01:20 18 would draw the panel's attention to  
15:01:23 19 when you look at it. And that is when  
15:01:25 20 you look at the file that it supposedly  
15:01:29 21 was produced under -- I'd like to  
15:01:33 22 compare these two. Todd, if you turn  
15:01:36 23 to the next page the next page. When  
15:01:40 24 you look at these two files you see on  
15:01:42 25 the right-hand side one of the

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15:01:44 2 linearity runs that was produced to us,  
15:01:46 3 and the folder, all of the linearity  
15:01:48 4 runs produced to us are saved in a  
15:01:50 5 folder with a date. Just like that one  
15:01:53 6 on the right-hand side, the 250906.  
15:01:57 7 That's pretty consistent all the way  
15:01:59 8 through.

15:01:59 9 On the left-hand side is the  
15:02:02 10 August linearity run that was produced  
15:02:06 11 to us and it was saved under a folder  
15:02:09 12 named stab 3. Now the reason why we  
15:02:11 13 draw your attention to this is that  
15:02:13 14 during the reprocessing analysis we  
15:02:17 15 were provided with a copy of the screen  
15:02:19 16 shot of all of the files at issue, that  
15:02:22 17 were saved on it, and it's about 40  
15:02:24 18 pages long, we'll point it out in our  
15:02:26 19 briefs, but we invite you to look  
15:02:28 20 through it. We could not find a stab 3  
15:02:30 21 file anywhere. So again, that plus the  
15:02:36 22 testimony of Ms. Frelat on the finding  
15:02:40 23 of the August linearity run, we find  
15:02:44 24 deeply troubling.

15:02:44 25 Again, it gives us no great

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15:02:49 2 pleasure to raise these issues. But  
15:02:52 3 they appear whenever there is a  
15:02:55 4 substantial issue in the case or at  
15:02:58 5 least a perceived substantial issue,  
15:03:01 6 linearity being one, column being  
15:03:04 7 another, and there is always a document  
15:03:08 8 or something that appears which appears  
15:03:11 9 to cover. And, you know, again, if it  
15:03:14 10 happened once, who knows. But at the  
15:03:19 11 rate at which it's happening, again, it  
15:03:23 12 does not give us any comfort and it  
15:03:27 13 should give the panel no comfort, or  
15:03:30 14 comfortable satisfaction, that the  
15:03:32 15 results were properly validated. If  
15:03:36 16 they were there would be no reason to  
15:03:38 17 do this kind of thing. This isn't  
15:03:41 18 science. It's wrong. It's just wrong.  
15:03:45 19 I'll leave the panel to read  
15:03:48 20 the linearity sections that we've  
15:03:52 21 included with our brief. And we will  
15:03:57 22 of course provide a closing brief. I  
15:03:59 23 think we've reached an agreement on the  
15:04:01 24 length and timing of it.

15:04:02 25 But let me close with this:

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15:04:07 2 I'll close with the same slide that we  
15:04:09 3 opened with, which is basically the  
15:04:11 4 same thing I feel like I've been saying  
15:04:12 5 for a year now. There are problems  
15:04:15 6 with this method. We haven't been able  
15:04:17 7 to clearly identify the method in this  
15:04:19 8 case but yet there are a number of ISL  
15:04:21 9 violations that are encompassed within  
15:04:23 10 it. We feel the method isn't  
15:04:27 11 accredited. The burden should be on  
15:04:29 12 USADA to establish under the Hamilton  
15:04:31 13 case that the method was -- that there  
15:04:34 14 was a method that was used and it is  
15:04:36 15 scientifically sound and reliable. The  
15:04:39 16 technicians in the case I think we all  
15:04:44 17 agree could have done a better job, and  
15:04:47 18 frankly, I think that it could be said  
15:04:50 19 a little bit stronger than that, but  
15:04:52 20 the important thing is not how strong  
15:04:55 21 you say it, but what the underlying  
15:04:57 22 facts are.

15:04:58 23 And again, the fact that we  
15:05:00 24 have the insertion of subjectivity in  
15:05:04 25 what should be objective testing

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15:05:07 2 processes, the basically strange kind  
15:05:12 3 of oral history of the method and what  
15:05:14 4 was done when it should be both  
15:05:16 5 documented and validated, you know, the  
15:05:20 6 fact that they didn't validate so many  
15:05:22 7 components of their IRMS test process.

15:05:26 8 One of the things that's  
15:05:27 9 interesting is if you read Dr. Ayotte's  
15:05:30 10 testimony from below, from the AAA  
15:05:33 11 panel, even she will say that you must  
15:05:37 12 validate your method. If you choose a  
15:05:41 13 positivity criteria of one out of four  
15:05:43 14 you must validate that method. If you  
15:05:45 15 choose to adopt a three out of four,  
15:05:49 16 you know, measure on your blank --  
15:05:52 17 excuse me, on your quality controls,  
15:05:54 18 you must validate it. We don't see any  
15:05:57 19 validation of these.

15:05:58 20 And worse yet, on a  
15:06:01 21 run-by-run basis there is a process in  
15:06:02 22 place that allows the technicians to  
15:06:04 23 change the values with no record of  
15:06:07 24 them ever being changed. And this is a  
15:06:10 25 violation of the ISL. Again, we will

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15:06:15 2 hook up the ISL sections with the  
15:06:17 3 conduct at issue, but from an  
15:06:19 4 impressionistic standpoint it's not a  
15:06:22 5 scientific method and it's not right.

15:06:24 6 We see that in the abnormal  
15:06:28 7 results that come from it, and lastly,  
15:06:31 8 we see on top of it all, on top of the  
15:06:35 9 abnormal results a lot, a lot of  
15:06:38 10 questionable evidence and ethics. And  
15:06:42 11 it is a substantial issue for us and  
15:06:44 12 again, one more factor, not the only  
15:06:47 13 factor, not even the primary factor,  
15:06:49 14 frankly, but one more factor in letting  
15:06:55 15 you know that USADA cannot meet its  
15:06:57 16 burden in this case. Thank you.

15:06:58 17 THE PRESIDENT: Thank you  
15:07:00 18 very much Mr. Young.

15:07:04 19 MR. YOUNG: May I make two  
15:07:05 20 logistical requests. I would love to  
15:07:07 21 sit down while I deliver but I need to  
15:07:09 22 use the Elmo, so if I could switch  
15:07:12 23 places and then move that over next to  
15:07:14 24 me. And my other logistical request  
15:07:17 25 would be to take a two minute break.

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15:07:29 2 THE PRESIDENT: We'll do  
15:07:31 3 that.

15:07:31 4 (A recess was taken.)

15:13:42 5 THE PRESIDENT: Please  
15:13:43 6 proceed, Mr. Young.

15:13:47 7 MR. YOUNG: First I would  
15:13:48 8 like to thank the panel very much for  
15:13:49 9 your insightful questions. I would  
15:13:53 10 particularly like to thank Mr. Rivkin  
15:13:55 11 and your firm for your hospitality  
15:13:57 12 throughout this period. Your people,  
15:14:00 13 although I know you work them like  
15:14:02 14 dogs, are absolutely delightful and  
15:14:06 15 unfailing in their courtesy and their  
15:14:07 16 helpfulness.

15:14:09 17 MR. RIVKIN: Thank you,  
15:14:09 18 we've been pleased to be able to  
15:14:11 19 accommodate everything here.

15:14:15 20 MR. YOUNG: Never before in  
15:14:17 21 the history of anti-doping adjudication  
15:14:19 22 has an adverse analytical finding  
15:14:22 23 undergone more scrutiny than this  
15:14:25 24 positive case. It's been looked at  
15:14:27 25 from every angle, it's been analyzed,

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15:14:30 2 reanalyzed, reprocessed, reviewed, but  
15:14:39 3 as Dr. Matthews observed, when you get  
15:14:46 4 down to the meat of the issue and you  
15:14:48 5 keep your eye focused on what's leading  
15:14:52 6 to the adverse events and you do your  
15:14:55 7 own calculations and you look at the  
15:14:57 8 raw data and you look at it this way  
15:14:59 9 and you look at it that way, it all  
15:15:01 10 keeps stacking back up to the same  
15:15:04 11 conclusion, and that conclusion is that  
15:15:06 12 this is a positive test.

15:15:07 13 It's a conclusion that has  
15:15:09 14 been checked by analysts in the A and  
15:15:15 15 the B, double-checked by the  
15:15:17 16 supervisor, and triple checked by the  
15:15:19 17 head of the laboratory.

15:15:20 18 It's a conclusion that's  
15:15:23 19 supported by the testimonies of Dr.  
15:15:26 20 Matthews, Dr. Brenna, Dr. Ayotte,  
15:15:29 21 Dr. Schaenzer, Dr. Shackelton,  
15:15:31 22 Dr. Clark, Dr. Catlin and Dr. Jumeau.  
15:15:36 23 Beyond that, it's a conclusion that was  
15:15:38 24 supported by the panel below's  
15:15:41 25 independent expert, Dr. Botre, and the



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15:15:43 2 majority of the panel.

15:15:49 3 In Appellant's opening  
15:15:52 4 statement you've heard claims that  
15:15:53 5 LNDD's story has changed. In fact, the  
15:15:57 6 story has really been the same from the  
15:15:59 7 start. And it's a story that's told by  
15:16:05 8 the A and B documentation packages.

15:16:07 9 As it happens with any case  
15:16:11 10 that's gone on this long where defenses  
15:16:15 11 have been raised and then they  
15:16:17 12 disappear and then new defenses appear  
15:16:19 13 at the last moment, and with all of  
15:16:22 14 this briefing, the nuances of the case  
15:16:27 15 have evolved, but in essence, with this  
15:16:30 16 appeal we've come full circle, and it's  
15:16:34 17 the same key issues in the  
15:16:35 18 documentation package that we've been  
15:16:37 19 looking at for a year and a half.

15:16:39 20 I guess we'll hear about  
15:16:43 21 them in the brief, but what we haven't  
15:16:45 22 heard a lot about in the last five days  
15:16:48 23 are violations of the International  
15:16:52 24 Standard For Laboratories, and  
15:16:53 25 particularly anything that would change

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15:16:54 2 the results of this test. I mean we've  
15:16:59 3 heard Dr. Ayotte testify quite sensibly  
15:17:02 4 that if the results aren't valid then  
15:17:05 5 that doesn't support the International  
15:17:08 6 Standard For Laboratories. No one  
15:17:10 7 would argue with that.

15:17:11 8 We also didn't hear any  
15:17:14 9 plausible explanation of how the  
15:17:18 10 results in this case might be affected  
15:17:26 11 that would turn a result greater than  
15:17:29 12 six down to something in the threes  
15:17:31 13 that would not meet WADA's positivity  
15:17:34 14 criteria with LNDD's 0.8 uncertainty on  
15:17:37 15 top.

15:17:37 16 I think one of the most  
15:17:42 17 important --

15:17:43 18 MR. RIVKIN: Sorry, just so  
15:17:44 19 I'm clear. Are you saying we should  
15:17:46 20 approach this case differently if the  
15:17:48 21 result were, say, 4.2 instead of a 6  
15:17:53 22 point something?

15:17:54 23 MR. YOUNG: I think your  
15:17:55 24 approach is exactly the same. What I'm  
15:17:57 25 saying is that if you're looking at a

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15:18:08 2 value where, gee, am I worried about  
15:18:13 3 manual integration, gee, am I worried  
15:18:15 4 about interference, and it was so  
15:18:26 5 close, it would cause you to continue  
15:18:28 6 to look harder.

15:18:30 7 For example, when you asked  
15:18:33 8 Simon Davis to do an example of what  
15:18:36 9 happens when you change the peak start  
15:18:41 10 and stop and he had to go halfway up  
15:18:44 11 the peak to get a delta value change of  
15:18:46 12 one, well that's pretty informative in  
15:18:53 13 a case where you're dealing with a  
15:18:54 14 delta value of 6.

15:18:57 15 If the margin in this case  
15:19:02 16 had been only a couple tenths of a mil,  
15:19:05 17 that becomes more informative.

15:19:08 18 Let me have you take a look  
15:19:15 19 at the history of the reprocessing  
15:19:17 20 because I think that's important. This  
15:19:34 21 is an affidavit that Simon Davis filed  
15:19:37 22 in the very first part of the case  
15:19:40 23 below. And we'll get you a cite for it  
15:19:44 24 in the brief.

15:19:45 25 The gist of this affidavit

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15:19:51 2 is that the OS/2 software in the  
15:20:03 3 IsoPrime 1 isn't very good, and that  
15:20:08 4 what we need to do is have reprocessing  
15:20:12 5 on this newer, better, more accurate  
15:20:16 6 MassLynx software. And then he goes on  
15:20:23 7 and he lists all the differences  
15:20:24 8 between the software. And he says, "If  
15:20:35 9 the new software were used, it would  
15:20:37 10 provide better peak detection, tested  
15:20:40 11 and documented background subtraction  
15:20:43 12 routines, and would remove any errors  
15:20:45 13 in the head amplifier firmware. It  
15:20:48 14 would also provide a stable and modern  
15:20:50 15 operating system with up to date  
15:20:52 16 antivirus and other security software."

15:20:57 17 And because of this, he  
15:20:59 18 needs, in paragraph F, the production  
15:21:02 19 of electronic data files so they can be  
15:21:05 20 processed on this new software that  
15:21:10 21 would help him in determining errors  
15:21:13 22 from the software, wrong background  
15:21:17 23 subtraction, wrong peak integration,  
15:21:19 24 and wrong reprocessing of the original  
15:21:22 25 data.

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15:21:22 2 Now this is a recognition by  
15:21:26 3 Simon Davis at the very beginning of  
15:21:29 4 the case that the original data was  
15:21:33 5 always there in the electronic data  
15:21:35 6 files. That was one of our discussions  
15:21:38 7 early and I think, Mr. Rivkin, you  
15:21:40 8 raised it, was so is the original data  
15:21:43 9 there, answer, yes, the original data's  
15:21:47 10 all there. It's all there with respect  
15:21:49 11 to the sample, it's all there with  
15:21:51 12 respect to the blank urines, it's all  
15:21:54 13 there with respect to the Mix Cal  
15:21:56 14 Acetate, it's all there with respect to  
15:21:57 15 the Mix Cal IRMS.

15:21:59 16 And then the final comment  
15:22:13 17 he says if we get to see the EDFs, if  
15:22:16 18 they're reprocessed, we'll be able to  
15:22:20 19 identify whether they did any manual  
15:22:22 20 integration. Which takes care of the  
15:22:29 21 record issue that they've been  
15:22:30 22 complaining about.

15:22:30 23 The next thing that happens  
15:22:35 24 in this story is the panel says, okay,  
15:22:38 25 you can do electronic data file

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15:22:41 2 reprocessing but you're going to do it  
15:22:43 3 under the supervision of our expert,  
15:22:46 4 Dr. Botre. And they're given an  
15:22:51 5 opportunity to provide instructions to  
15:22:55 6 Dr. Botre on how they want to do this,  
15:22:58 7 and this is one of those instructions  
15:23:01 8 from Simon Davis telling Dr. Botre, you  
15:23:05 9 know, we're going to give you  
15:23:07 10 instructions on how we want the  
15:23:09 11 reprocessing to take place.

15:23:10 12 Interestingly enough, in the  
15:23:24 13 documents you've read from Simon Davis  
15:23:27 14 where he says that reprocessing on the  
15:23:31 15 new MassLynx software is going to tell  
15:23:34 16 us whether what they did below was  
15:23:36 17 correct or not correct, he doesn't say  
15:23:39 18 anything about, well, the chromatograms  
15:23:45 19 are so bad it doesn't matter whether  
15:23:48 20 you reprocess them or not. In fact,  
15:23:50 21 they had the chromatograms in the  
15:23:52 22 documentation package well before this  
15:23:55 23 affidavit and you would have thought  
15:23:58 24 that if he was so concerned about the  
15:24:01 25 chromatograms producing bad data on the

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15:24:04 2 MassLynx, he might have just said  
15:24:07 3 something about it instead of let me  
15:24:10 4 reprocess it on the MassLynx and we'll  
15:24:13 5 all have the answer.

15:24:14 6 This is Dr. Botre's report  
15:24:21 7 as the independent expert. In  
15:24:27 8 paragraph 2.2 Dr. Botre makes clear  
15:24:33 9 that the reprocessing was under his  
15:24:35 10 supervision and responsibility. In 2.5  
15:24:41 11 he points out that the reprocessing was  
15:24:44 12 carried out taking into account  
15:24:47 13 instructions in two documents produced  
15:24:50 14 by the representatives of the athlete.  
15:24:55 15 In 2.6 he says that the documents  
15:25:01 16 following reprocessing, which are all  
15:25:04 17 of the reprocessed electronic data  
15:25:08 18 files, have been evaluated, and that  
15:25:11 19 means by him, also in light of the  
15:25:16 20 information in the original documents.  
15:25:21 21 So he evaluated the reprocessing in  
15:25:24 22 light of the original reports in the A  
15:25:28 23 and B doc pack.

15:25:28 24 On the next page he says the  
15:25:34 25 objective of his report is to report on

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15:25:36 2 and discuss the data obtained following  
15:25:39 3 the reprocessing and the analysis of  
15:25:44 4 the A and B samples, the originals.

15:25:51 5 In 4.1 he describes his  
15:25:53 6 involvement which includes not only the  
15:25:56 7 evaluation of the experimental data, so  
15:25:59 8 he isn't just reporting experimental  
15:26:01 9 data, he's evaluating it.

15:26:04 10 On 6.2, on the next page, he  
15:26:13 11 talks about reprocessing on the new  
15:26:20 12 instrument using MassLynx. And on 6.7  
15:26:24 13 he talks about the three different ways  
15:26:29 14 in which the data was reprocessed.

15:26:50 15 So what do we learn from  
15:26:54 16 that? These are the original results.  
15:26:58 17 The auto is reprocessing all of the  
15:27:02 18 data that's the electronic data files.  
15:27:05 19 You can tell from that what effect  
15:27:08 20 manual integration had. None of this  
15:27:11 21 document disappeared or was lost. If  
15:27:13 22 Simon Davis would have wanted to he  
15:27:16 23 could have found out whether any of the  
15:27:21 24 Mix Cal Acetates or Mix Cal IRMSs had  
15:27:24 25 been reprocessed and he could have



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15:27:26 2 found out how those delta values  
15:27:28 3 compared to the delta values reported  
15:27:30 4 in the doc pack.

15:27:31 5 Another thing you find out  
15:27:34 6 from this table is when they  
15:27:37 7 reprocessed with no background  
15:27:40 8 subtraction -- now, Dr. Botre points  
15:27:45 9 out that this isn't in their SOP nor is  
15:27:50 10 the automatic, but that's the way that  
15:27:53 11 Dr. Davis wanted it done. But you  
15:27:55 12 learned something very interesting from  
15:27:58 13 the zero background subtraction, and  
15:28:00 14 that is that if there was such a big  
15:28:03 15 problem including extra baseline in the  
15:28:09 16 manual integration such that the extra  
15:28:13 17 baseline had a delta value of minus 50  
15:28:16 18 or minus 70 or whatever, well, they  
15:28:21 19 included the whole darn thing. And it  
15:28:26 20 didn't change the delta value  
15:28:28 21 significantly.

15:28:28 22 The results when they  
15:28:38 23 reprocessed this data on the new  
15:28:41 24 MassLynx software, which is what Dr.  
15:28:45 25 Davis wanted, was that the value for

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15:28:52 2 5-alpha Pdiol was a positive minus  
15:28:57 3 7.03. This is what he asked for.  
15:29:01 4 Unfortunately you have to be careful  
15:29:02 5 what you ask for. He got a positive  
15:29:05 6 here.

15:29:05 7 Now, they point out that  
15:29:13 8 yes, but on the MassLynx software the  
15:29:15 9 blank urine was positive too, isn't  
15:29:18 10 that a problem. And Dr. Botre answers  
15:29:23 11 that at paragraph 6.16 where he points  
15:29:34 12 out that when you came to these last  
15:29:38 13 two values the computer crashed. And  
15:29:43 14 then he gives you references to the  
15:29:45 15 screen shots that show that the  
15:29:47 16 computer crashed.

15:29:48 17 So these values are straight  
15:29:51 18 MassLynx. You can't rely on those  
15:29:55 19 values.

15:30:02 20 On Page 7.1, or excuse me,  
15:30:05 21 in paragraph 7.1 he points out that the  
15:30:13 22 automatic correction and the no  
15:30:18 23 background reprocessing are not part of  
15:30:23 24 the standard operating procedure which  
15:30:26 25 specifically allows for manual

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15:30:30 2 integration.

15:30:30 3 And then at 7.3 he answers  
15:30:37 4 the question that I know Mr. Paulsson  
15:30:42 5 raised, and Mr. Suh has raised, which  
15:30:48 6 is look, I realize that some concern  
15:30:51 7 can be due to the fact that manual  
15:30:53 8 processing, especially if not performed  
15:30:56 9 correctly, can, in principle, markedly  
15:30:59 10 modify the results. Under 7.4.

15:31:06 11 Therefore, all of the data obtained by  
15:31:09 12 the procedure described in the previous  
15:31:11 13 section," this is the A and the B and  
15:31:15 14 all the reprocessing, "were evaluated,"  
15:31:19 15 evaluated by Dr. Botre, "to verify  
15:31:23 16 whether some flaws could be discovered  
15:31:25 17 in the process of data acquisition and  
15:31:27 18 processing originally carried out."

15:31:30 19 This is whether there's anything wrong  
15:31:31 20 with the A and the B on the occasion of  
15:31:34 21 the analysis of the A and or B samples.  
15:31:39 22 So that's what he did. He went back  
15:31:40 23 and looked at it.

15:31:50 24 When you go to 7.10 what he  
15:31:56 25 says is, summarizing his data, that the

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15:32:01 2 difference for 5-alpha and Pd1ol are  
15:32:12 3 positive any way you look at it, and  
15:32:25 4 that when you do it on the new  
15:32:29 5 instrument as requested by Dr. Davis,  
15:32:31 6 it's the most positive.

15:32:33 7 And then he answers the  
15:32:38 8 question that he posited above in 7.11,  
15:32:42 9 which is to say that when you do the  
15:32:46 10 manual background subtraction, it  
15:32:49 11 appears to be a scientifically sound  
15:32:52 12 process aimed to improve the quality of  
15:32:55 13 the signal and therefore the  
15:32:57 14 reliability of the results.

15:33:00 15 And as an example of that he  
15:33:13 16 points out that in evaluating the data  
15:33:16 17 and the chromatograms, that the manual  
15:33:25 18 integration corrected what were errors  
15:33:27 19 by the software in coming up with these  
15:33:31 20 two values for the blank urine. He  
15:33:38 21 asked himself that question and he  
15:33:40 22 resolved it.

15:33:41 23 Finally, as to his summary  
15:33:47 24 and conclusions, he finds that manual  
15:33:56 25 correction of the background originally

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15:33:58 2 carried out for the A and B was carried  
15:34:01 3 out correctly and appropriately.

15:34:04 4 And second, that the  
15:34:09 5 reprocess data, and then regardless of  
15:34:14 6 the variability of the individual  
15:34:15 7 results, and that's something that  
15:34:17 8 you've heard about today, show that in  
15:34:21 9 all cases the difference between  
15:34:25 10 5-alpha and Pdiol is greater than  
15:34:29 11 three.

15:34:40 12 THE PRESIDENT: Just before  
15:34:41 13 you leave this, can I ask a couple of  
15:34:42 14 questions about procedure.

15:34:44 15 MR. YOUNG: Sure.

15:34:45 16 THE PRESIDENT: When this  
15:34:47 17 report was received did he actually  
15:34:49 18 present it to the -- did he come to the  
15:34:53 19 hearing and present it or the parties  
15:34:55 20 were just given an opportunity to make  
15:34:57 21 submissions on this as they saw fit?

15:34:59 22 MR. YOUNG: Here's what  
15:35:00 23 happened. He sent this report to the  
15:35:02 24 parties and to the panel. At the end  
15:35:06 25 of the hearing the panel specifically

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15:35:12 2 invited both parties to ask Dr. Botre  
15:35:18 3 any questions that they wanted to ask  
15:35:20 4 him. And both parties declined.

15:35:26 5 THE PRESIDENT: So he was  
15:35:27 6 physically present and available if  
15:35:29 7 they'd asked?

15:35:30 8 MR. YOUNG: He was physically  
15:35:32 9 present throughout the entire nine day  
15:35:34 10 hearing and he was physically present to  
15:35:37 11 answer questions and the parties were  
15:35:39 12 specifically invited to ask him  
15:35:41 13 questions.

15:35:41 14 THE PRESIDENT: Thank you.

15:35:42 15 MR. YOUNG: Let me address  
15:35:58 16 the --

15:35:58 17 THE PRESIDENT: Forgive me,  
15:35:59 18 one more question. Did either side, I  
15:36:01 19 imagine this is the case, in their  
15:36:03 20 closing addresses to the panel refer to  
15:36:06 21 this report?

15:36:08 22 MR. YOUNG: Oh, yes.

15:36:09 23 THE PRESIDENT: Yes. So in  
15:36:10 24 other words, they didn't want to  
15:36:12 25 question him, but they made submissions

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15:36:13 2 on what was said in the report?

15:36:16 3 MR. YOUNG: That is my  
15:36:18 4 recollection. I recollect that I did.  
15:36:24 5 And I'd have to go back and look at the  
15:36:26 6 record to see whether Mr. Landis'  
15:36:28 7 counsel did. He may not have. When we  
15:36:32 8 read this report we thought the case  
15:36:34 9 would be over. It as it turned out  
15:36:38 10 went forward.

15:36:39 11 THE PRESIDENT: Thank you.

15:36:40 12 MR. YOUNG: And I don't know  
15:36:45 13 whether the panel knows or not, but  
15:36:48 14 after the hearing we both submitted  
15:36:52 15 very lengthy proposed findings of fact  
15:36:56 16 and conclusions of law.

15:36:57 17 THE PRESIDENT: Yes, I saw  
15:36:58 18 that.

15:36:59 19 MR. YOUNG: Just one other  
15:37:02 20 point to make from this document. Some  
15:37:07 21 issue has been made by the difference  
15:37:09 22 in 5-alpha Pdiol between the original  
15:37:15 23 manual integration and the manual  
15:37:18 24 integration on reprocessing. Remember  
15:37:23 25 that for each one of these measurements

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15:37:27 2 under LNDD's uncertainty, this is plus  
15:37:31 3 or minus 0.8. So 6.14 plus or minus  
15:37:41 4 0.8 is 6.94. 6.95 minus 0.8 is 6.15.  
15:37:53 5 So in terms of their established  
15:37:57 6 measure of uncertainty and the measure  
15:37:59 7 of uncertainty that they use in  
15:38:02 8 positivity, these numbers are entirely  
15:38:04 9 consistent.

15:38:04 10 A word about chromatography.

15:38:15 11 As I mentioned, they didn't seem to  
15:38:18 12 think that the chromatography was so  
15:38:20 13 bad that it would affect the MassLynx  
15:38:24 14 analysis when they asked for MassLynx.  
15:38:29 15 You've heard eight experts and  
15:38:33 16 Dr. Botre say that they have no problem  
15:38:37 17 with the chromatography that is  
15:38:40 18 relevant to this particular positive  
15:38:44 19 finding.

15:38:45 20 With respect to other parts  
15:38:53 21 of chromatograms like where the  
15:38:56 22 internal standard is, Dr. Ayotte told  
15:39:00 23 you and actually Simon Davis confirmed  
15:39:02 24 this, that if you're really interested  
15:39:05 25 in the delta value of a particular



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15:39:08 2 peak, you establish a temperature and  
15:39:13 3 pressure method that will cause that  
15:39:15 4 peak to come out in a clean part of the  
15:39:18 5 chromatogram. And so if you're  
15:39:22 6 interested in chromatography you ought  
15:39:27 7 to look at the clean parts of the  
15:39:30 8 chromatograms.

15:39:34 9 It isn't like LNDD makes  
15:39:37 10 decisions on chromatograms and peaks  
15:39:42 11 that are not separated. Remember the  
15:39:48 12 question of Cynthia Mongongu what she  
15:39:52 13 would do with peaks 4 and 5 out of the  
15:39:57 14 sample that Mr. Suh showed her? That  
15:40:00 15 sample happened to be one of Mr.  
15:40:04 16 Landis' other tour samples that did not  
15:40:09 17 have exogenous testosterone in it, and her  
15:40:11 18 answer was, I wouldn't put values on  
15:40:13 19 those.

15:40:14 20 When Mr. Suh was questioning  
15:40:17 21 Dr. Ayotte about chromatography it was  
15:40:20 22 interesting that he asked her  
15:40:22 23 hypothetical questions rather than go  
15:40:26 24 to any particular chromatogram to make  
15:40:31 25 his point.

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1  
15:40:32 2 Mr. Suh has said that isn't  
15:40:38 3 it interesting that USADA has focused  
15:40:40 4 on the fraction 3 chromatograms in this  
15:40:43 5 case. And the answer is yes, but it  
15:40:50 6 isn't because we're trying to hide  
15:40:54 7 behind the analysis of the other five  
15:40:56 8 samples or we're afraid of Dr. Amory's  
15:40:59 9 testimony. It was confusing in Malibu  
15:41:09 10 when we did this in nine days. What is  
15:41:14 11 important for this panel is to look at  
15:41:17 12 the data at stage 17 upon which the  
15:41:20 13 adverse analytical finding is based.  
15:41:22 14 The results of the other samples are  
15:41:25 15 corroborative, but we wouldn't suggest  
15:41:27 16 in a minute that standing alone those  
15:41:33 17 prove a positive, because there aren't  
15:41:35 18 any A sample.  
15:41:36 19 On the issue of co-eluting  
15:41:41 20 peaks, there has been too much  
15:41:44 21 testimony here on that. Dr. Meier-  
15:41:48 22 Augenstein said a lot about it. That  
15:41:51 23 was the point of Dr. Matthews'  
15:41:56 24 testimony in his written statement  
15:41:59 25 where he says if there was co-elution

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15:42:04 2 it would be so small it would make no  
15:42:06 3 difference and oh, by the way, whatever  
15:42:10 4 this would be that was co-eluting did  
15:42:12 5 not come from outer space and would not  
15:42:14 6 have a delta value that when you  
15:42:16 7 compare the tiny size would have made  
15:42:20 8 any difference.

15:42:20 9 Dr. Brenna looks at the two  
15:42:23 10 to one trace where peaks go up above  
15:42:26 11 and below the line and says I can see  
15:42:29 12 that little peak and it's not co-eluted  
15:42:32 13 with 5-alpha. That's in his statement.  
15:42:35 14 And Dr. Jumeau points out in her  
15:42:38 15 statement, again, that if the value of  
15:42:41 16 this little peak had been wildly  
15:42:46 17 negative so that its small amount could  
15:42:49 18 affect the entirety of the valuation  
15:42:51 19 for 5-alpha, that the two to one trace  
15:42:53 20 would have gone off the bottom of the  
15:42:55 21 charts down.

15:43:03 22 So questions that Claire was  
15:43:04 23 asked about Dr. De Boer. She said he  
15:43:14 24 only -- he asked me only to work on the  
15:43:16 25 sample when he was there. And when it

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15:43:23 2 came to the manual integration he said  
15:43:27 3 he didn't need to see how that was  
15:43:29 4 done. He could have, but he didn't  
15:43:31 5 need to see it. He went to talk to Dr.  
15:43:37 6 de Ceaurriz. Now, the two things he  
15:43:39 7 wanted from Dr. de Ceaurriz were  
15:43:41 8 historical data on the blank urine pool  
15:43:43 9 and the validation on uncertainty.

15:43:50 10 In the International  
15:43:53 11 Standard For Laboratories those are two  
15:43:53 12 things that the ISL specifically says  
15:43:55 13 that a laboratory doesn't have to  
15:43:57 14 produce or shouldn't produce. In this  
15:44:04 15 case, in the discovery, LNDD produced  
15:44:07 16 both of them.

15:44:11 17 She goes on to say, and  
15:44:13 18 these are in response to questions from  
15:44:15 19 Mr. Rivkin, that he did ask for the  
15:44:18 20 GC/MS spectra of the analytes, but  
15:44:21 21 nothing about the IRMS integration.

15:44:23 22 Did he raise any questions  
15:44:27 23 whether you had properly identified  
15:44:30 24 which people was related to which  
15:44:32 25 metabolite? No. It shows you that

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15:44:36 2 Dr. De Boer was looking at peak  
15:44:39 3 identity, because that's what the GC/MS  
15:44:43 4 spectra are all about.

15:44:44 5 And in response to Mr.  
15:44:48 6 Paulsson's question to Dr. Ayotte this  
15:44:51 7 morning, if Dr. De Boer would have been  
15:44:54 8 here as a witness I would have not  
15:44:56 9 asked him any questions about are you  
15:44:59 10 familiar with the ISL, have you ever  
15:45:05 11 operated a laboratory that is subject  
15:45:07 12 to the ISL, are you familiar with ISO,  
15:45:09 13 because this guy was a lab director.  
15:45:11 14 He ran the Portuguese lab.

15:45:41 15 Peak identification. We'll  
15:45:44 16 start out with the column issue and I'd  
15:45:46 17 be happy to talk about it more, but the  
15:45:53 18 bottom line on the column issue is that  
15:45:55 19 the Agilent column is in Mr. Le Petit's  
15:46:00 20 car, and that as Corinne Buisson says  
15:46:03 21 in her declaration LNDD has never  
15:46:06 22 purchased such a column.

15:46:24 23 As to peak identification,  
15:46:25 24 yes, there is a technical document,  
15:46:28 25 2003IDCR, that sets criteria for

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15:46:31 2 matching retention times, and that is  
15:46:33 3 precisely what LNDD did between a known  
15:46:42 4 reference and between the blank urine  
15:46:43 5 and the athlete's urine in GC/MS.

15:46:45 6 Not only did they do that,  
15:46:57 7 they --

15:46:57 8 MR. RIVKIN: I'm not sure if  
15:46:59 9 these are new charts or charts we've  
15:47:01 10 already seen. I can't remember if they  
15:47:02 11 were in the opening or not because  
15:47:04 12 we've looked at a lot of charts. If  
15:47:05 13 they haven't I assume they'll be  
15:47:07 14 attached to the brief or provided to  
15:47:09 15 us?

15:47:10 16 MR. YOUNG: They will. We  
15:47:11 17 would have given all of this in  
15:47:13 18 advance, but I didn't know which things  
15:47:15 19 I was going to make red circles on.

15:47:17 20 These are the mass spec,  
15:47:19 21 these are the fingerprints that the  
15:47:21 22 experts have talked about that say you  
15:47:24 23 really know what these peaks are and  
15:47:25 24 there's only these peaks and there's  
15:47:27 25 nothing under them hiding. And this is

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15:47:34 2 a comparison of the retention times.

15:47:36 3 So you really, really know.

15:47:42 4 MR. RIVKIN: Sorry, you  
15:47:43 5 moved from the column to the peak  
15:47:45 6 identification very quickly. Just what  
15:47:47 7 conclusion -- what weight, if any, or  
15:47:50 8 conclusion, if any, should we draw from  
15:47:53 9 the fact that the rows on the column  
15:47:59 10 form were out of chronological order?

15:48:03 11 MR. YOUNG: I wouldn't draw  
15:48:04 12 any conclusion on it. I mean if that  
15:48:11 13 happens and --

15:48:13 14 MR. RIVKIN: If it's  
15:48:14 15 contemporaneous, if it's that day, how  
15:48:17 16 would that happen?

15:48:18 17 MR. YOUNG: It wouldn't have  
15:48:19 18 been contemporaneous. You would have  
15:48:21 19 filled out the two January entries at  
15:48:26 20 the same time or in different order  
15:48:31 21 would be my commonsense understanding  
15:48:33 22 of something like that. Or one of  
15:48:36 23 those dates was a mistake. Those are  
15:48:41 24 the two logical explanations. I  
15:48:46 25 certainly wouldn't jump from that to

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15:48:47 2 the conclusion that the last entry was  
15:48:50 3 a fraud. If somebody wanted to create  
15:48:54 4 a fraudulent document, I would have  
15:48:57 5 picked the 16th instead of the 17th as  
15:49:01 6 the day to write into that document  
15:49:03 7 because as you notice, Le Petit was  
15:49:06 8 there on one day and it goes into  
15:49:08 9 service the next day. The explanation  
15:49:11 10 is that the column had to be, I can  
15:49:17 11 never remember the word for it, but  
15:49:19 12 primed or whatever.

15:49:30 13 So on the top -- and on this  
15:49:34 14 whole peak identification thing, the  
15:49:37 15 question is whether the peaks have been  
15:49:39 16 properly identified or not. Whether  
15:49:43 17 you do it with your left hand, whether  
15:49:45 18 you do it with your right hand,  
15:49:47 19 whatever, is this panel at the end of  
15:49:49 20 the day comfortably satisfied that the  
15:49:51 21 peaks have been properly identified.  
15:49:54 22 And what we have done here is to make  
15:49:58 23 something that is really pretty simple  
15:50:02 24 appear complex. It's like the game  
15:50:07 25 that I used to play with my children



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15:50:09 2 and they'd bring these things home from  
15:50:11 3 school that says here's what we know,  
15:50:15 4 then what can we conclude that the  
15:50:17 5 answer is.

15:50:18 6 And what we know is that we  
15:50:23 7 know positively the identity of this  
15:50:28 8 internal standard, 5-beta, 5-alpha and  
15:50:32 9 Pdiol. We know from the Mix Cal  
15:50:37 10 Acetate which is run contemporaneously  
15:50:39 11 on the same instrument the retention  
15:50:43 12 times of 5-beta -- of the internal  
15:50:45 13 standard and 5-beta, okay. So we've  
15:50:51 14 got these two just from the Mix Cal  
15:50:54 15 Acetate.

15:50:54 16 What else do we know? We  
15:50:59 17 know that this is the same urine, it's  
15:51:01 18 the same little vial, that there's  
15:51:04 19 nothing in the urine in the GC/MS  
15:51:09 20 that's not in the IRMS, there's nothing  
15:51:11 21 in the IRMS that's not in the GC/MS.  
15:51:14 22 We know that the peaks are going to  
15:51:18 23 come out in the same order, and we know  
15:51:22 24 that given the fact that these  
15:51:24 25 compounds have similar carbon

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15:51:27 2 structures, that the big peaks are  
15:51:31 3 going to be the big peaks and the small  
15:51:33 4 peaks are going to be the small peaks.

15:51:35 5 And so knowing all that, how  
15:51:40 6 tough is it to decide that this is  
15:51:43 7 5-alpha and this is Pdiol? And there  
15:51:46 8 was an interesting illustration of this  
15:51:49 9 when Cynthia was testifying and she  
15:51:53 10 just used her cursor to identify the  
15:51:56 11 internal standard and she just used her  
15:51:58 12 cursor to identify the 5-beta, and she  
15:52:04 13 said, and the next peak is 5-alpha and  
15:52:08 14 Todd just went ahead and put the cursor  
15:52:10 15 in the dot on 5-alpha. I mean that's  
15:52:15 16 what it is.

15:52:15 17 It's what it is in -- this  
15:52:29 18 is the comparison of the blank urine to  
15:52:33 19 Mr. Landis' sample. And the retention  
15:52:38 20 times for purposes of the technical  
15:52:43 21 document on identity are virtually  
15:52:46 22 identical. And you know what? Every  
15:52:49 23 time you run this blank urine those  
15:52:51 24 retention times are virtually  
15:52:55 25 identical.

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15:53:02 2 When Mr. Suh was asking  
15:53:05 3 Cynthia and Claire to try and identify  
15:53:08 4 the internal standard in fraction 1  
15:53:14 5 which was the negative tour sample and  
15:53:20 6 Cynthia didn't play along, she looked  
15:53:22 7 at the other documents in the book more  
15:53:24 8 like she would if she were sitting in  
15:53:27 9 front of her computer screen.

15:53:31 10 Claire didn't, she played  
15:53:33 11 along and tried to read the retention  
15:53:35 12 times on the small screen. And that's  
15:53:39 13 very hard to do. You can see you're  
15:53:41 14 squinting. What she said on redirect  
15:53:45 15 was that if I were at my computer  
15:53:47 16 screen I could have seen the retention  
15:53:49 17 times here, blown this up and figured  
15:53:51 18 out exactly which one of those was the  
15:53:54 19 internal standard and I would have also  
15:53:57 20 had the retention times over here for  
15:54:05 21 the -- that was actually in the GC/MS.  
15:54:09 22 I would also have had the retention  
15:54:11 23 times over here. Remember it was  
15:54:15 24 supposed to be 870 and one was 860 and  
15:54:18 25 one was 880. Yes, but I would have had

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15:54:21 2 the retention time for the Mix Cal  
15:54:23 3 Acetate so I would have known that it  
15:54:25 4 was the 880 and not the 860.

15:54:32 5 MR. RIVKIN: Mr. Young, how  
15:54:33 6 do you respond to Mr. Suh's argument  
15:54:35 7 that the ISL requires a method for  
15:54:37 8 identifying the peaks, that the lab  
15:54:41 9 doesn't have a written method for doing  
15:54:44 10 so and that by itself is a violation of  
15:54:48 11 the ISL?

15:54:49 12 MR. YOUNG: Two ways.  
15:54:50 13 First, if you look at the witness  
15:54:52 14 statements the COFRAC auditor, Mr. Le  
15:54:58 15 Bizec was there and physically watched  
15:55:02 16 Claire identify peaks.

15:55:06 17 And second, this document,  
15:55:11 18 the matching of retention times between  
15:55:15 19 the blank urine and the athlete's  
15:55:19 20 sample is one of the required documents  
15:55:23 21 in the documentation package. I think  
15:55:36 22 it is -- let's try 185. Here it is.  
15:55:48 23 So this is one of the required -- go  
15:55:50 24 back so they can see the whole form,  
15:55:52 25 please. This is one of the required

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15:55:54 2 forms that the technicians fill out.

15:56:06 3 On the bottom of that form you see that

15:56:07 4 the retention times of the sample and

15:56:09 5 the blank urine are matched.

15:56:12 6 I'd go a step -- I mean this

15:56:21 7 answers your question, but I'd also go

15:56:23 8 a step further that under the whole ISO

15:56:26 9 scheme you are not in any way required

15:56:29 10 to have a piece of paper documenting

15:56:33 11 each and every one of your processes.

15:56:35 12 That's why they come do an in-person

15:56:39 13 physical inspection of what you do.

15:56:40 14 Let me go to the WADA

15:56:48 15 criteria very quickly. The WADA

15:57:01 16 criteria is clear. One metabolite

15:57:04 17 greater than three. You can look at

15:57:08 18 Dr. Ayotte's testimony below and it was

15:57:12 19 not what Mr. Suh said it was today.

15:57:16 20 Dr. Ayotte was very clear that WADA

15:57:22 21 sets the criteria of three and then

15:57:25 22 it's up to the laboratory not to

15:57:28 23 validate the number 3, but to validate

15:57:33 24 the that they have a method that is

15:57:35 25 accurate to reach a particular number

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15:57:41 2 plus or minus something.

15:57:43 3 So big difference between  
15:57:45 4 criteria and method. If the laboratory  
15:57:48 5 had to validate -- if every laboratory  
15:57:51 6 had to validate criteria then what's  
15:57:54 7 the purpose of the World Anti-Doping  
15:57:57 8 Code that's supposed to harmonize all  
15:57:58 9 this and the International Standard and  
15:58:00 10 the technical documents?

15:58:13 11 I'm a little -- given the  
15:58:14 12 comment that we must have agreed with  
15:58:16 13 Dr. Amory, I'm disappointed that Mr.  
15:58:19 14 Suh chose to pass on Dr. Shackelton and  
15:58:21 15 Dr. Clark. You would have found them  
15:58:23 16 informative in person and I think  
15:58:25 17 you'll find their witness statements  
15:58:27 18 informative when you read them.

15:58:32 19 One of the points that they  
15:58:34 20 make very clearly is that for some  
15:58:36 21 people, this is based on both their  
15:58:39 22 experience in endocrinology, andrology  
15:58:47 23 and steroid metabolism, in some people  
15:58:51 24 they're going to favor 5-alpha pathway.  
15:58:54 25 Also, for some substances like gels,

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15:58:57 2 those are going to favor the 5-alpha  
15:58:59 3 pathway. So in some people who are  
15:59:01 4 doping you're going to have results  
15:59:03 5 just like Floyd Landis' stage 17  
15:59:06 6 result. And that's why the World  
15:59:12 7 Anti-Doping Code says one metabolite.

15:59:13 8 And if I may go back, Mr.  
15:59:15 9 Rivkin, I tried to ask -- I tried to do  
15:59:18 10 a good job answering the question you  
15:59:20 11 asked me in opening, but as I thought  
15:59:27 12 back on it, and even worse as I read  
15:59:29 13 it, I didn't do a good job. So let me  
15:59:32 14 try again.

15:59:32 15 Why is it right that you  
15:59:37 16 have three out of four criteria in the  
15:59:39 17 Mix Cal Acetate and it only takes one  
15:59:43 18 metabolite to be positive for doping?  
15:59:45 19 And the answer is it's a little like  
15:59:49 20 comparing an apple to a brick. And  
15:59:51 21 there are statistical reasons for that  
15:59:55 22 which we'll put in the brief, but  
15:59:58 23 there's also a commonsense reason for  
16:00:00 24 that.

16:00:00 25 When you're looking at the

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16:00:04 2 Mix Cal Acetate, first, and I'll clear  
16:00:09 3 one other thing up before I go to  
16:00:10 4 answer your other question, two of your  
16:00:13 5 questions at once, the 16.3 is a  
16:00:21 6 substance standard. When Eurofins  
16:00:24 7 sells the substance they're selling you  
16:00:26 8 this substance plus or minus .3. The  
16:00:29 9 0.5 criteria is a method criteria.  
16:00:33 10 When we measure that's the difference.  
16:00:36 11 Now I'll go back and answer  
16:00:37 12 your other question. When they  
16:00:41 13 establish a criteria of three out of  
16:00:43 14 four being within 0.5, the perfect  
16:00:48 15 score for the Mix Cal Acetate would be  
16:00:51 16 four out of four exactly on the  
16:00:55 17 Eurofins value. In this case, by the  
16:00:57 18 way, we did have four out of four. But  
16:01:00 19 four out of four exactly on the  
16:01:03 20 Eurofins value, that's a perfect score.  
16:01:06 21 A passing score is 3 out of four within  
16:01:11 22 0.5, which is a lot higher than 75  
16:01:15 23 percent statistically, by the way.  
16:01:17 24 That's a high standard. Okay, so  
16:01:20 25 that's the perfect score and that's a



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16:01:22 2 passing score.

16:01:23 3 Now when we look at

16:01:24 4 positivity, a perfect score on an

16:01:27 5 athlete being positive is not four

16:01:30 6 metabolites out of four metabolites.

16:01:32 7 Some labs only analyze two. We also

16:01:35 8 know that some people are only -- that

16:01:37 9 are doping, that are doping in the

16:01:39 10 studies only have one positive

16:01:43 11 metabolite. So a perfect score in

16:01:47 12 doping is not four out of four

16:01:49 13 metabolites. A perfect score in doping

16:01:54 14 would be a little like we have in Mr.

16:01:56 15 Landis' sample, which is one metabolite

16:01:59 16 that is a screaming positive. A

16:02:03 17 passing score would be one metabolite

16:02:06 18 that's three.

16:02:06 19 I'm not going to spend a lot

16:02:18 20 of time on the pattern of Mr. Landis'

16:02:20 21 tour results and the reason is because

16:02:24 22 I think in response to the panel's

16:02:26 23 questioning Dr. Amory basically said,

16:02:28 24 you know, there aren't a lot of

16:02:30 25 studies, this is the way I feel, but

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16:02:31 2 it's hard to be certain. It is not  
16:02:35 3 USADA's burden to establish how it is  
16:02:40 4 that a prohibited substance got into an  
16:02:43 5 athlete's urine; just that it's there.

16:02:49 6 Dr. Clark and Dr. Shackelton  
16:02:51 7 have provided explanations in their  
16:02:53 8 witness statements. He could have been  
16:02:59 9 using different things at different  
16:03:00 10 times. He could have been using oral  
16:03:02 11 testosterone at an early stage, he  
16:03:03 12 could have been using T-Gel during the  
16:03:07 13 17th stage, and most importantly,  
16:03:09 14 because there was a question so why did  
16:03:11 15 he have a positive sample when he was  
16:03:13 16 riding on the last day in the  
16:03:15 17 Champs-Elysees, this is a cake walk,  
16:03:18 18 the answer is if he used T-Gel for the  
16:03:21 19 important time trial the day before it  
16:03:24 20 could very well stay around. That's  
16:03:28 21 the answer.

16:03:29 22 What we know from the  
16:03:30 23 studies and what we know from  
16:03:32 24 Shackelton and Clark is that there's a  
16:03:35 25 lot of variations between different

1 P R O C E E D I N G S

16:03:37 2 individuals, you look at those T/E  
16:03:39 3 graphs that go up and down within  
16:03:41 4 individuals, and it makes a difference  
16:03:44 5 what you're using, what combination  
16:03:46 6 you're using, and in particular, the  
16:03:49 7 timing.

16:03:57 8 The internal standard  
16:03:59 9 variation question. First, there's no  
16:04:02 10 document anywhere that shows -- that  
16:04:05 11 says that this internal standard needs  
16:04:08 12 to be within 0.5 of the Eurofins value  
16:04:14 13 or it fails our criteria. No such  
16:04:18 14 document.

16:04:18 15 What we looked at were the  
16:04:22 16 quality control documents. 174 and  
16:04:27 17 175, these are the quality control  
16:04:42 18 documents that have to do with the Mix  
16:04:43 19 Cal Acetate, the Mix Cal IRMS. You  
16:04:46 20 notice that these are signed off on  
16:04:47 21 with ouis and nons. You're not going  
16:04:50 22 to find the internal standard used in  
16:04:57 23 urine anywhere in this quality control  
16:05:02 24 chart.

16:05:13 25 Audit and accreditation, I

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16:05:15 2 think what Mr. Landis would like us to  
16:05:17 3 do is do accreditation through  
16:05:18 4 litigation. Well, we haven't seen the  
16:05:20 5 validation of this or we haven't seen  
16:05:22 6 the validation of that. The ISL says  
16:05:24 7 that those aren't all documents that  
16:05:27 8 are supposed to be produced. What we  
16:05:32 9 have is the pretty clear statement of  
16:05:34 10 Mr. Leguy that the laboratory is  
16:05:37 11 accredited.

16:05:37 12 As to the point that it was  
16:05:42 13 Claire who the inspector watched  
16:05:44 14 perform, that makes a lot of sense. If  
16:05:46 15 I were an inspector, I would want to  
16:05:49 16 watch the most junior person on the  
16:05:52 17 team to make sure they did it right  
16:05:54 18 before I signed off on the lab. And it  
16:05:59 19 isn't just like Claire was the only  
16:06:02 20 person there to describe the method,  
16:06:04 21 look at the witness statement of  
16:06:09 22 Corinne Buisson who describes what they  
16:06:12 23 went through when she was there with  
16:06:13 24 the inspector. I mean it's kind of a  
16:06:16 25 shame that Mr. Landis insisted that

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16:06:21 2 Corinne Buisson come all the way over  
16:06:23 3 here and then chose not to ask her  
16:06:25 4 questions. He says he's running out of  
16:06:29 5 time, but he spent 20 minutes asking  
16:06:31 6 Dr. Matthews about one of his  
16:06:33 7 colleagues' papers. He spent 20  
16:06:35 8 minutes asking Dr. Ayotte about that  
16:06:37 9 article. He didn't call Corinne  
16:06:41 10 Buisson.

16:06:42 11 He says that this  
16:06:44 12 testosterone log is this evidence of  
16:06:45 13 great fraud, but he chose not to call  
16:06:47 14 the author, Agnes Gaillard.

16:07:02 15 Credibility and experts.  
16:07:18 16 This is Mr. Suh's comment on  
16:07:20 17 credibility from his opening. What  
16:07:22 18 we're used to in dealing with experts,  
16:07:26 19 at least in my world is the lawyers are  
16:07:28 20 the advocates, the experts are the  
16:07:31 21 impartial scientists. Something has  
16:07:34 22 gone wrong on Mr. Landis' side in this  
16:07:37 23 case. Every single one of the expert  
16:07:41 24 reports talks about that the conclusion  
16:07:46 25 here is morally and ethically wrong,

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16:07:49 2 same words, all of them. Dr.  
16:07:52 3 Goldberger's answer to where the words  
16:07:53 4 came from was from my assistant, who's  
16:07:57 5 that? Maurice.

16:08:00 6 Then you go to Simon Davis  
16:08:04 7 who not only takes that tone, but he  
16:08:06 8 accuses the lab of coverups and fraud  
16:08:10 9 but when questioned directly by the  
16:08:12 10 panel he had an opportunity to say I  
16:08:15 11 really mean it, they should be shut  
16:08:18 12 down and instead, no, they just need  
16:08:20 13 retraining, and then do you want to  
16:08:22 14 retract it, no, I don't want to retract  
16:08:25 15 it either.

16:08:25 16 And then you go to Dr.  
16:08:28 17 Goodman whose expert report is majorly  
16:08:36 18 plagiarized from an advocacy brief that  
16:08:42 19 had been filed months before he was  
16:08:45 20 engaged in the case. That is not the  
16:08:49 21 kind of expert advice that is useful to  
16:08:54 22 people who are sitting on a panel  
16:08:55 23 trying to rely on experts to help them  
16:09:00 24 through these kind of difficult issues.

16:09:01 25 This is out of Floyd Landis'

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16:09:14 2 book. From the Appellant's point of  
16:09:21 3 view this is not a case about science.  
16:09:23 4 This is a case about trying to take  
16:09:26 5 down the French laboratory in an  
16:09:29 6 embarrassing way.

16:09:30 7 At the end of the day, you  
16:09:38 8 should find that it isn't Cynthia  
16:09:41 9 Mongongu or Claire Frelat or any of the  
16:09:46 10 other hard working employees of the  
16:09:48 11 Montreal laboratory who have --  
16:09:54 12 Montreal, French lab, sorry, who have  
16:09:58 13 any reason to be embarrassed in this  
16:10:00 14 case.

16:10:01 15 Thank you.

16:10:11 16 THE PRESIDENT: Thank you  
16:10:12 17 very much, Mr. Young.

16:10:13 18 You got there with time to  
16:10:17 19 spare. We're grateful to you.

16:10:19 20 Mr. Suh.

16:10:42 21 MR. SUH: With respect to  
16:10:53 22 the peak identification issue, I think  
16:10:57 23 the question before the panel is  
16:10:59 24 whether or not the panel is comfortably  
16:11:01 25 satisfied that the peaks were correctly

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16:11:03 2 identified by LNDD. The issue with  
16:11:06 3 respect to the lack of the SOP or  
16:11:09 4 written validation studies or validated  
16:11:13 5 techniques and the fact that the lab  
16:11:16 6 techs have disagreed about what the  
16:11:18 7 method is, is with respect to the  
16:11:20 8 COFRAC audit, that we can't be sure  
16:11:23 9 sitting here today exactly what it was  
16:11:26 10 the COFRAC auditor accredited.

16:11:28 11 And that was really --  
16:11:30 12 perhaps that wasn't made perfectly  
16:11:32 13 clear before, but I realize as part of  
16:11:34 14 this discussion it may not have been.  
16:11:36 15 That with respect to the accreditation  
16:11:38 16 issue, that in order for us sitting  
16:11:42 17 here today to know that the COFRAC  
16:11:46 18 accreditor had in fact accredited the  
16:11:49 19 method we are talking about, we can't  
16:11:51 20 be certain of that because certainly  
16:11:54 21 the techs, again, going through their  
16:11:57 22 declaration and their testimony, it is  
16:11:59 23 not perfectly clear what it is their  
16:12:02 24 methods are and there is no writing to  
16:12:04 25 reflect it.



1 P R O C E E D I N G S

16:12:05 2 I'd like to address a little  
16:12:10 3 bit this issue with respect to the  
16:12:11 4 process surrounding Dr. Botre and to  
16:12:15 5 give the panel -- I've been looking  
16:12:18 6 through my emails on how this all  
16:12:20 7 occurred. Frankly, since they are --  
16:12:22 8 they went to and from the panel and  
16:12:24 9 Dr. Botre it might make sense to send  
16:12:27 10 some of them to the panel in this case.

16:12:28 11 In essence, when Dr. Botre  
16:12:34 12 was first suggested to us there was a  
16:12:37 13 request from the panel -- actually,  
16:12:40 14 before Dr. Botre came on the scene  
16:12:43 15 there was a request from the panel for  
16:12:44 16 the panel to select an independent  
16:12:47 17 panel expert to handle the request  
16:12:49 18 related to the EDFs.

16:12:50 19 The request was this: That  
16:12:53 20 we had requested a number of documents  
16:12:57 21 as part of discovery and that there was  
16:12:59 22 an agreement that the discovery  
16:13:02 23 requests would all be satisfied by the  
16:13:04 24 electronic data files. The USADA  
16:13:08 25 opposed it. And again, they opposed it

1 P R O C E E D I N G S

16:13:11 2 on the grounds that somehow we would  
16:13:12 3 tamper with the EDF files.

16:13:14 4 We settled on a process by  
16:13:18 5 which we would be able to conduct  
16:13:20 6 certain operations. The panel then  
16:13:24 7 asked for the appointment of an  
16:13:39 8 independent expert. We suggested an  
16:13:43 9 expert; we could not agree. And time  
16:13:46 10 was ticking down during this process.  
16:13:50 11 Dr. Botre was recommended to us, I'll  
16:13:53 12 tell you frankly, although it is clear  
16:13:55 13 that we agreed to the appointment of  
16:13:57 14 Dr. Botre, we objected at first because  
16:14:00 15 Dr. Botre is the head of an anti-doping  
16:14:03 16 lab, a WADA anti-doping lab and we felt  
16:14:06 17 that we had a concern and we submitted  
16:14:08 18 this in writing that he could not be  
16:14:10 19 impartial.

16:14:10 20 Time was passing. As time  
16:14:14 21 got closer to the time that the trial  
16:14:16 22 was to begin, we basically made a  
16:14:18 23 decision since we couldn't find an  
16:14:19 24 expert, that we would accept Dr. Botre,  
16:14:21 25 and we did.

1 P R O C E E D I N G S

16:14:22 2 The reason why I give the  
16:14:24 3 panel this background is that we as  
16:14:27 4 counsel were aware that Dr. Botre  
16:14:30 5 continued to assist the panel.  
16:14:38 6 Frankly, we made the decision that  
16:14:41 7 during the course of the time leading  
16:14:42 8 up to the AAA hearing that it would be  
16:14:46 9 unwise to keep on, having already  
16:14:48 10 raised the issue several times of  
16:14:50 11 concern about his impartiality, to push  
16:14:53 12 issues regarding decisions which we  
16:14:56 13 believed related to documents or  
16:14:59 14 processes we would not get.

16:15:00 15 It was frankly a decision we  
16:15:02 16 had to make because, first of all, we  
16:15:08 17 didn't believe we'd be successful, and  
16:15:10 18 secondly, we were keenly aware that the  
16:15:12 19 likelihood is Dr. Botre would serve in  
16:15:15 20 some capacity as the proceedings  
16:15:17 21 continued.

16:15:17 22 We weren't happy about it,  
16:15:19 23 still not happy about it to this day.  
16:15:21 24 But --

16:15:21 25 THE PRESIDENT: Excuse me,

1 P R O C E E D I N G S

16:15:23 2 Mr. Suh, I find it very hard to  
16:15:27 3 understand the concept of partially  
16:15:28 4 agreeing. Either you agreed or you  
16:15:32 5 didn't, and as I understand the record,  
16:15:34 6 whatever may have been your inner  
16:15:36 7 thoughts or your external thoughts, you  
16:15:39 8 agreed to this person being the  
16:15:42 9 independent expert.

16:15:44 10 MR. SUH: Let me be clear, I  
16:15:45 11 did agree, we did agree. But our  
16:15:50 12 concerns about the way this was  
16:15:51 13 possibly going to break out didn't in  
16:15:56 14 fact inform the level of objections  
16:15:57 15 that we thought we would be able to  
16:15:59 16 raise with respect to the EDF  
16:16:01 17 processes, and frankly, we didn't think  
16:16:03 18 that further requests with respect to  
16:16:05 19 the EDFs would be granted. And that  
16:16:09 20 hopefully will provide some background  
16:16:11 21 with respect to some of the issues that  
16:16:13 22 were raised with respect to the  
16:16:15 23 reprocessing.

16:16:15 24 I think that would be it for  
16:16:32 25 our rebuttal.

1 P R O C E E D I N G S

16:16:33 2 THE PRESIDENT: Thank you  
16:16:35 3 very much. Could we move on to the  
16:16:41 4 final details that I heard this morning  
16:16:43 5 that you had agreed on both a date for  
16:16:46 6 the posthearing briefs and the length;  
16:16:50 7 is that correct?

16:16:53 8 MR. BARNETT: I'm not aware  
16:16:54 9 what the agreement is yet, but I think  
16:16:55 10 we're close. We agreed on 50 pages and  
16:16:58 11 we suggested April 18th and I hadn't  
16:17:00 12 heard the date back.

16:17:03 13 MR. WEISS: I think  
16:17:04 14 Appellant's are going to propose April  
16:17:07 15 9th as the deadline.

16:17:09 16 MR. BARNETT: Candidly, I  
16:17:11 17 have a four-day trial starting April  
16:17:13 18 2nd and I'm not sure when -- I know we  
16:17:15 19 have a very good running court  
16:17:17 20 reporter, actually one of the best I've  
16:17:19 21 seen on a daily basis, but when we get  
16:17:21 22 that truly finalized so we can quote it  
16:17:24 23 directly to the panel, I think April  
16:17:25 24 9th is a little too soon from our  
16:17:28 25 perspective.

1 P R O C E E D I N G S

16:17:39 2 THE PRESIDENT: We see no  
16:17:40 3 reason to push for the earlier date.  
16:17:45 4 In the overall scheme of things and our  
16:17:47 5 writings on it won't make a difference.  
16:17:49 6 So we will accept April 17 did you say?

16:17:54 7 MR. BARNETT: 18th is the  
16:17:55 8 Friday.

16:17:56 9 THE PRESIDENT: April 18  
16:17:58 10 simultaneous exchange, 50 pages.

16:18:07 11 MR. PAULSSON: 50 pages that  
16:18:08 12 look like the previous pages.

16:18:11 13 THE PRESIDENT: No cribbing  
16:18:13 14 with tiny little type pages.

16:18:19 15 The other thing I wanted to  
16:18:21 16 raise, and I'll be frank, I hadn't had  
16:18:23 17 a chance to discuss it with my  
16:18:24 18 colleagues, but they can intervene as  
16:18:26 19 they see fit, we did ask for issues and  
16:18:29 20 for the obvious reason that we want to  
16:18:31 21 make sure that we address all of the  
16:18:33 22 arguments being made. And the result  
16:18:38 23 was that the parties, to their credit,  
16:18:43 24 did give us issues. In fact, it might  
16:18:49 25 be said that the respondents went

1 P R O C E E D I N G S

16:18:51 2 beyond the call of duty by initially  
16:18:54 3 drafting for the Appellant what were  
16:18:56 4 thought to be its issues. But  
16:18:59 5 obviously, we must take the March 7th  
16:19:04 6 letter from Gibson Dunn as articulating  
16:19:07 7 the Appellant's issues.

16:19:08 8 This is not meant in any way  
16:19:16 9 to be a criticism, but one of the  
16:19:19 10 differences between the two sets of  
16:19:22 11 issues, I'm talking here about the  
16:19:24 12 Appellant's March 7th and the February  
16:19:31 13 21st -- sorry, let me just see here --  
16:19:40 14 February 21st issues by the respondent,  
16:19:43 15 was that there is a greater degree of  
16:19:49 16 generality in the Appellant's issues, I  
16:19:53 17 stress that's not a criticism, but it  
16:19:55 18 may mean that as things unfold we may  
16:20:01 19 find some of the respondent's  
16:20:06 20 assessment of the Appellant's issues as  
16:20:10 21 falling under the more general  
16:20:12 22 headings. I don't know that. But what  
16:20:13 23 I do want to suggest is that without  
16:20:18 24 cramping your style in the briefs it  
16:20:20 25 would be very helpful to the panel if

1 P R O C E E D I N G S

16:20:22 2 there was some attempt made to relate  
16:20:24 3 the submissions to the list of issues.

16:20:26 4 In addition, we noticed in  
16:20:31 5 USADA's attempt at the Appellant's  
16:20:35 6 issues that under the issue articulated  
16:20:38 7 there was a reference to the USADA  
16:20:42 8 brief. And both sides might care to  
16:20:47 9 help us by using the framework of their  
16:20:52 10 issues and following the practice of  
16:20:56 11 saying where one will find the key  
16:20:59 12 points. Or the other way around. In  
16:21:02 13 the narrative of your closing  
16:21:04 14 submissions if you had a footnote  
16:21:07 15 saying this relates to the following  
16:21:09 16 issue, so that we can make sure we  
16:21:13 17 don't miss any issues that should  
16:21:17 18 properly be addressed.

16:21:18 19 So if it's acceptable to  
16:21:21 20 you, it would be helpful for us, for  
16:21:24 21 both sides to footnote the submissions  
16:21:26 22 to the issues. So we have a clear  
16:21:28 23 understanding of, and an ability to  
16:21:33 24 check that we've got all the issues  
16:21:35 25 covered.



1 P R O C E E D I N G S

16:21:37 2 MR. RIVKIN: Maybe I could  
16:21:39 3 put the request a different way, which  
16:21:42 4 is that I agree with everything the  
16:21:43 5 president said. It would be I think  
16:21:46 6 much more useful to you as well as to  
16:21:49 7 us, obviously, if the posthearing  
16:21:51 8 briefs didn't run past each other. And  
16:21:55 9 while you have previously not been able  
16:21:57 10 to agree on a single set of issues,  
16:22:00 11 maybe after sitting here for the last  
16:22:02 12 five days, now that Mr. Young and Mr.  
16:22:04 13 Suh are sitting on the same side of the  
16:22:06 14 table, you might actually be able to  
16:22:08 15 come up with one list of the issues to  
16:22:12 16 be covered. Your closings were pretty  
16:22:15 17 much on the same issues and it wouldn't  
16:22:18 18 be -- it might not take very long for  
16:22:22 19 you to agree on just a set of issues to  
16:22:24 20 be covered and then use those as the  
16:22:27 21 headings of the brief so we could read  
16:22:29 22 one section against the other section  
16:22:31 23 with whatever evidence you think you've  
16:22:35 24 proven on that. And obviously there  
16:22:36 25 are going to be some thought or general

1 P R O C E E D I N G S

16:22:39 2 sections that each of you is going to  
16:22:40 3 make and that's fine, but it might be  
16:22:42 4 helpful if you could agree effectively  
16:22:45 5 on almost a common outline for the  
16:22:46 6 posthearing briefs. It would make it  
16:22:48 7 easier for you to write and it would  
16:22:50 8 certainly make it easier for us to  
16:22:52 9 read.

16:22:53 10 MR. SUH: That makes perfect  
16:22:54 11 sense. I think we can agree on  
16:22:56 12 structuring the briefs in order of  
16:22:58 13 issues and even ordering the issues in  
16:23:00 14 the same numerical order so that you  
16:23:03 15 can hold them up side by side and with  
16:23:06 16 an index in the front.

16:23:07 17 MR. BARNETT: And hopefully  
16:23:08 18 with the 50 page limit that might  
16:23:10 19 encourage us both to narrow where  
16:23:12 20 appropriate so that the panel's  
16:23:14 21 directed to the live issues.

16:23:15 22 THE PRESIDENT: Yes, that  
16:23:16 23 would be very helpful. And obviously  
16:23:20 24 if either side, and this applies  
16:23:25 25 particularly to the Appellant, conclude

1 P R O C E E D I N G S

16:23:28 2 with the benefit of the hearing that  
16:23:31 3 there's anything in there, I'm not  
16:23:34 4 saying for a minute there will be, if  
16:23:35 5 there is something that for various  
16:23:38 6 reasons is not going to be pursued,  
16:23:40 7 then obviously we would like to have  
16:23:44 8 that noted so we don't go and write  
16:23:47 9 something when it's really not  
16:23:48 10 necessary anymore.

16:23:52 11 MR. PAULSSON: Two things.  
16:23:57 12 I'm in the fortunate position of being  
16:23:59 13 able to agree with both of my  
16:24:01 14 colleagues. But I think this is the  
16:24:06 15 time in the posthearing briefs not so  
16:24:09 16 much for prose, but for references  
16:24:13 17 because it would be of assistance to  
16:24:14 18 the arbitrators in considering the  
16:24:21 19 rhetoric of persuasion which we've  
16:24:24 20 heard today. That was the time for  
16:24:25 21 that and now it would be good to have  
16:24:29 22 comprehensive references.

16:24:31 23 For example, if Mr. Suh is  
16:24:37 24 on the subject, if he continues to  
16:24:41 25 pursue the themes of bias in the lab

1 P R O C E E D I N G S

16:24:49 2 and coverup in the light of the  
16:24:53 3 evidence of these hearings, it would be  
16:24:56 4 handy not to have a lot of adjectives  
16:24:58 5 about it, but just notations of what  
16:25:01 6 are -- what is the evidence of those  
16:25:04 7 propositions, in objective form. This  
16:25:11 8 is the basis on which those points are  
16:25:13 9 still being pursued. And again, the  
16:25:15 10 reason I even put a question mark is  
16:25:18 11 that today in closing submissions what  
16:25:19 12 I heard was rather the language of  
16:25:22 13 indicia of falsity rather than a clear  
16:25:25 14 statement to the effect that there had  
16:25:27 15 been bias and coverup which of course  
16:25:30 16 is strong accusations.

16:25:33 17 I have one specific question  
16:25:36 18 to both parties and that relates to Mr.  
16:25:38 19 De Boer, and I'm speaking personally.  
16:25:40 20 I would be very interested in knowing  
16:25:43 21 with respect to the reservations made  
16:25:44 22 on the last page, the addendum or  
16:25:47 23 whatever you call it that our attention  
16:25:49 24 was called to after his opportunity to  
16:25:55 25 be present at the processing of the B

1 P R O C E E D I N G S

16:25:58 2 sample, whether or not those  
16:26:03 3 reservations were maintained in a  
16:26:11 4 significant way subsequent to the  
16:26:15 5 signing of that actual protocol. Or  
16:26:21 6 if, the contrary, there's something in  
16:26:23 7 the nature of waiver or estoppel with  
16:26:27 8 regard to those reservations as matters  
16:26:30 9 went forward. It seems that Mr. De  
16:26:36 10 Boer disappeared from the forensic  
16:26:38 11 scene after the B sample. So that  
16:26:40 12 would be something I would appreciate  
16:26:42 13 being educated with respect to and I  
16:26:43 14 think the question equally applies to  
16:26:45 15 both sides.

16:26:46 16 Thank you.

16:26:52 17 THE PRESIDENT: The  
16:26:53 18 concluding matters of administration we  
16:26:55 19 want to mention. First, as was noted  
16:27:02 20 in the directions, when we reach the  
16:27:08 21 point where the award is issued the CAS  
16:27:15 22 rules provide that -- I'll read what it  
16:27:17 23 says, and this is at paragraph 12 of  
16:27:19 24 our direction, pursuant to Rule 59.6 of  
16:27:23 25 the code, "The award and/or a summary

1 P R O C E E D I N G S

16:27:25 2 setting forth the results of the  
16:27:26 3 proceeding shall be made public by the  
16:27:28 4 CAS unless both parties agree that they  
16:27:30 5 should remain confidential."

16:27:36 6 All that we need to say is  
16:27:37 7 that unless both parties come to us and  
16:27:39 8 say that the award shall remain  
16:27:45 9 confidential, then the award will be  
16:27:47 10 issued in the normal way. We don't  
16:27:50 11 have to do anything then. I imagine  
16:27:53 12 that there will not be such an  
16:27:55 13 agreement. But just to draw your  
16:27:57 14 attention to that fact. If that is  
16:27:59 15 going to be the case then we need to  
16:28:01 16 hear about any agreement.

16:28:01 17 Finally, since we are now  
16:28:04 18 closing the hearing, pursuant to Rule  
16:28:09 19 44.2 I'm obliged to say that it's not  
16:28:11 20 permissible for any party hereafter to  
16:28:14 21 submit further pleadings or evidence  
16:28:16 22 with the exception of the posthearing  
16:28:19 23 submissions which have been authorized.

16:28:25 24 In conclusion, on behalf of  
16:28:26 25 the panel, may I express our appreciation

1 P R O C E E D I N G S

16:28:29 2 for the way in which the parties have  
16:28:31 3 presented their submissions and  
16:28:34 4 arguments. Whenever we've had a request  
16:28:35 5 it's always been promptly responded to.  
16:28:39 6 And we've had cooperation. It looked  
16:28:44 7 like a challenging assignment to complete  
16:28:47 8 within five days, but due to the  
16:28:48 9 cooperation of the parties and the  
16:28:51 10 splendid assistance of our secretary with  
16:28:55 11 her extremely competent estimations of  
16:29:00 12 hearing time, we've managed to do it  
16:29:04 13 well. So we are obliged to you all for  
16:29:06 14 that.

16:29:06 15 And to our transcriber,  
16:29:10 16 Gail, we pay you a great debt. It's  
16:29:16 17 hard to imagine a more complicated  
16:29:19 18 range of words that you've had to  
16:29:22 19 follow, and already even in the draft  
16:29:26 20 transcripts we're seeing a high quality  
16:29:29 21 record. So thank you very much for  
16:29:30 22 that.

16:29:30 23 So we formally declare the  
16:29:38 24 hearing closed and wish you safe  
16:29:41 25 traveling.

1 P R O C E E D I N G S

16:29:42 2 MR. YOUNG: May I ask one  
16:29:44 3 procedure in response to the new point  
16:29:45 4 that Mr. Paulsson raised, which is  
16:29:47 5 rather than have both sides run out and  
16:29:50 6 try to get ahold of Dr. De Boer, would  
16:29:52 7 it make sense for either a member of  
16:29:55 8 the panel or Mr. Reeb or somebody to  
16:29:59 9 contact him, and I think the questions  
16:30:01 10 would be what exactly was it that you  
16:30:04 11 were asking for and what happened? Or  
16:30:07 12 are you simply asking for more in our  
16:30:10 13 briefs on what happened?

16:30:11 14 MR. PAULSSON: No, my  
16:30:12 15 thought really was that this was to  
16:30:15 16 call at least my attention to what is  
16:30:17 17 on the record in this respect. If it  
16:30:19 18 isn't, it isn't.

16:30:21 19 MR. YOUNG: Okay. Good.  
16:30:22 20 Thank you.

16:30:23 21 THE PRESIDENT: One final  
16:30:24 22 thing. I don't want to appear as if  
16:30:26 23 the only useful thing that our  
16:30:28 24 secretary did was calculate hearing  
16:30:30 25 time. She has been of enormous



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16:30:33 2 assistance. That was her towering  
16:30:38 3 achievement, but there are many other  
16:30:40 4 achievements alongside that. So thank  
16:30:42 5 you very much.

16:30:43 6 (Time noted: 4:30 p.m.)

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I, GAIL F. SCHORR, a Certified Shorthand Reporter, Certified Realtime Reporter and Notary Public within and for the State of New York, do hereby certify that the foregoing proceedings were taken before me on March 24, 2008;

That the within transcript is  
a true record of said proceedings;

That I am not connected by blood or marriage with any of the parties herein nor interested directly or indirectly in the matter in controversy, nor am I in the employ of the counsel.

IN WITNESS WHEREOF, I have  
hereunto set my hand this \_\_\_\_ day of  
\_\_\_\_\_, 2008.

GAIL F. SCHORR, C.S.R., C.R.R.

## 1 E X H I B I T S

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| 5 | in evidence, Montreal      |      |      |
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| 7 | identification.)           |      |      |

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